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Drug & Cosmetic INDUSTRY

AUGUST 1946

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THOMAS R. FARRELL, Editor

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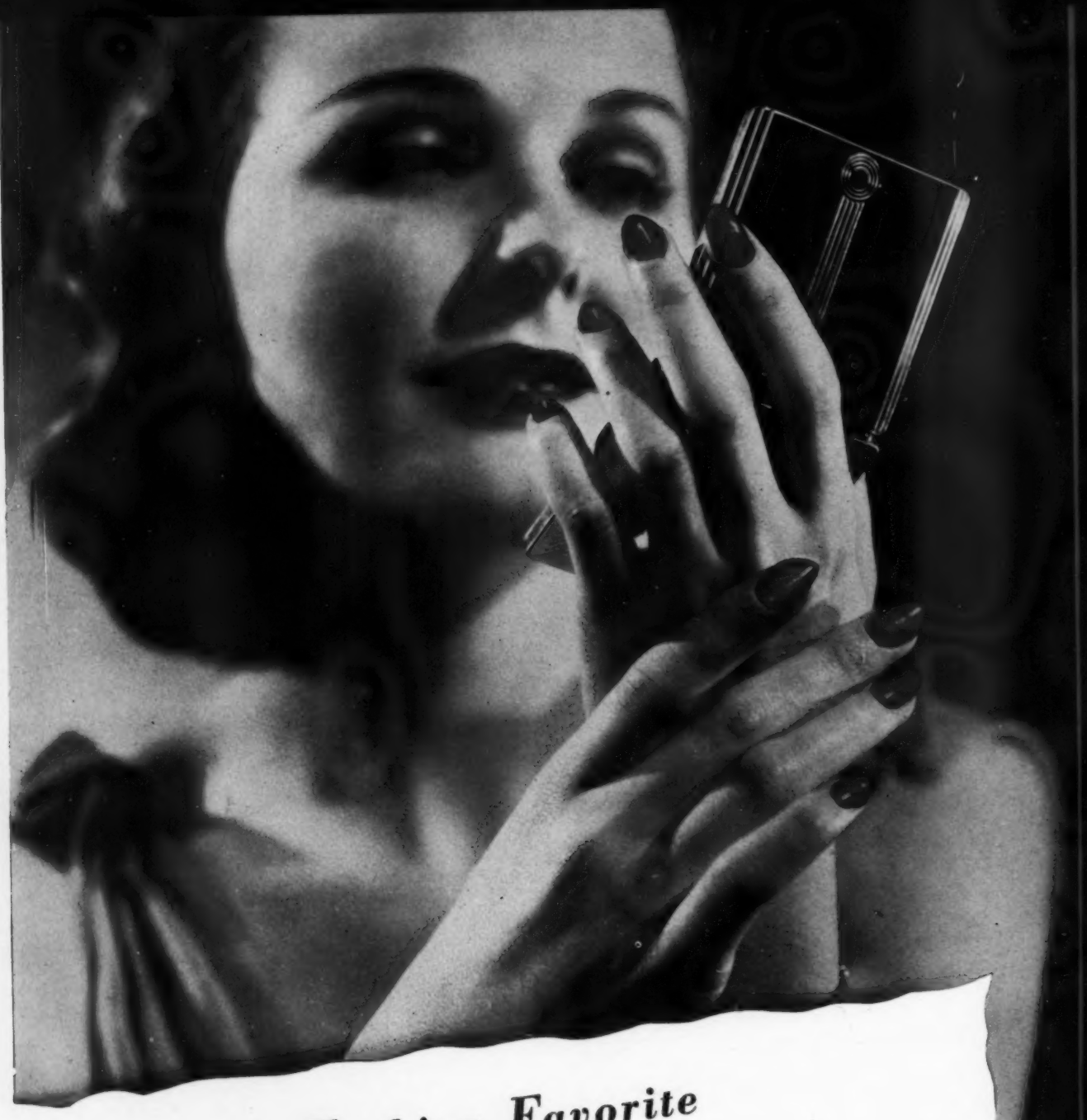

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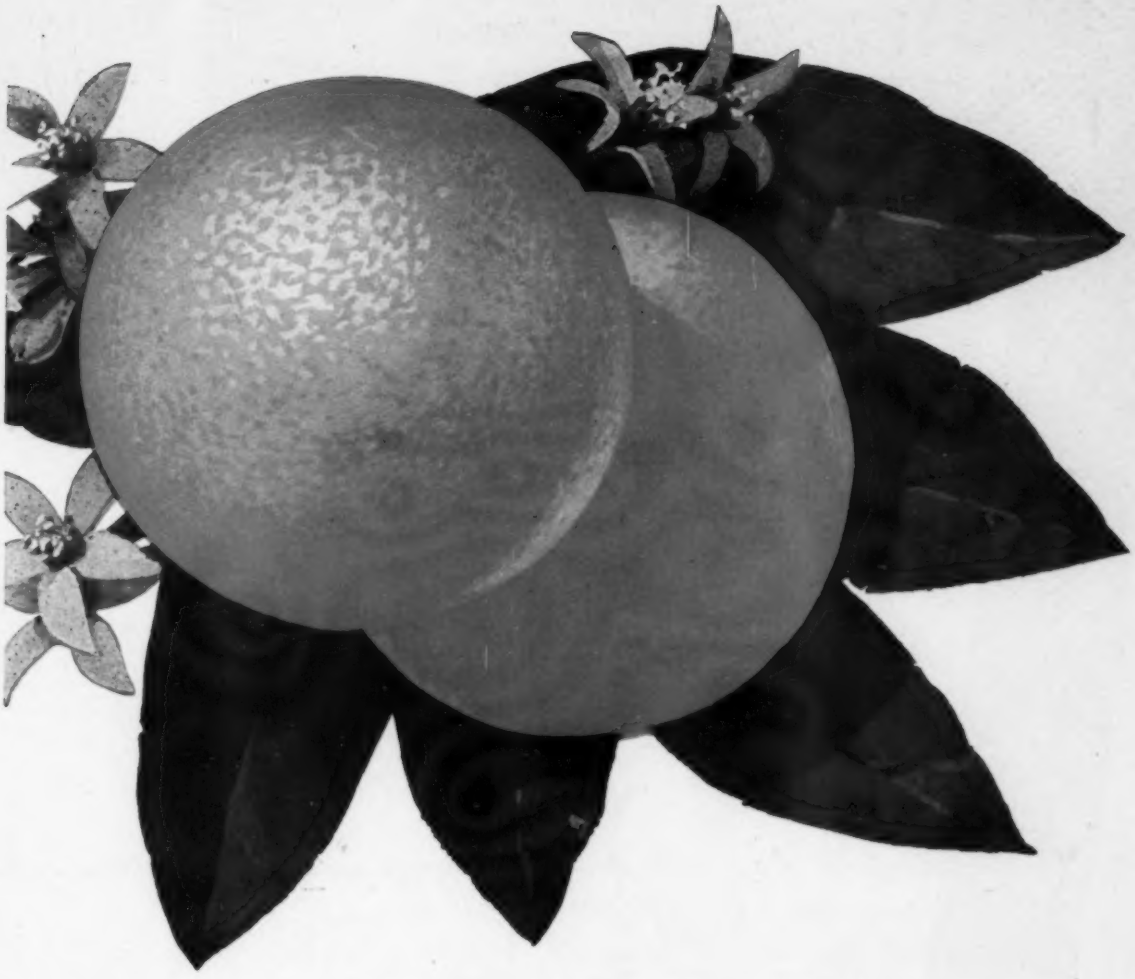

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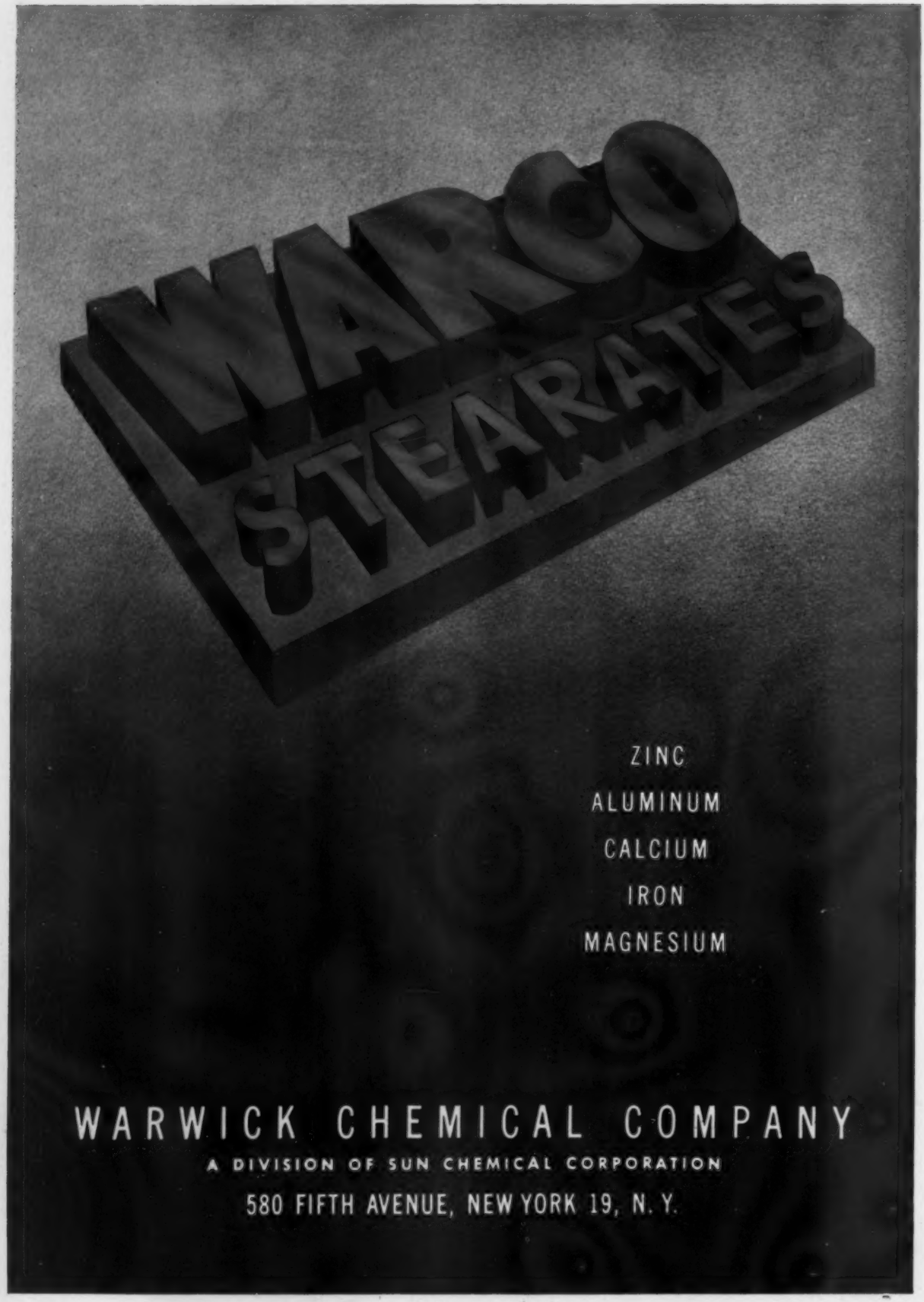
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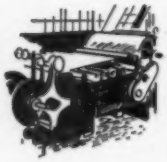

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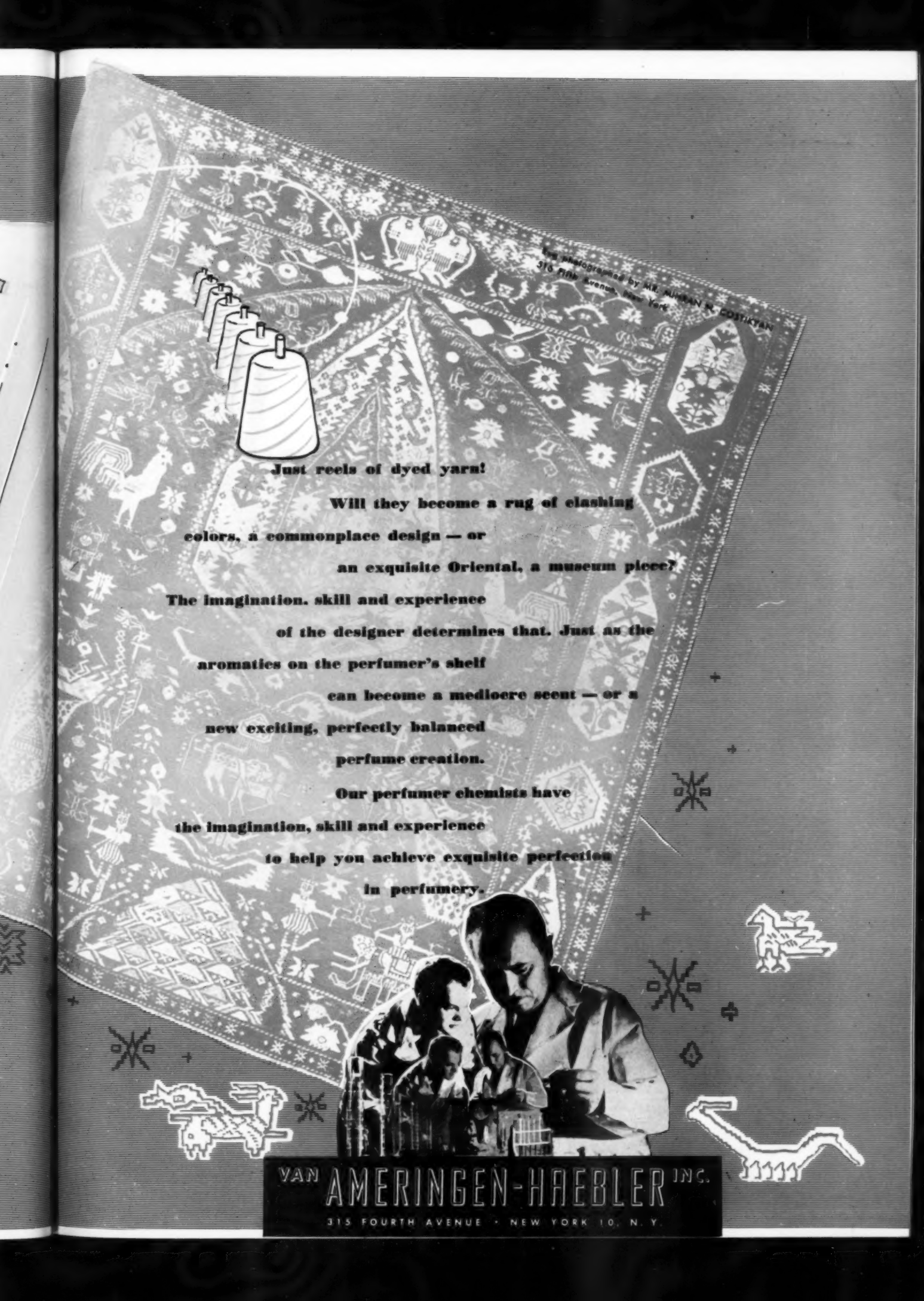

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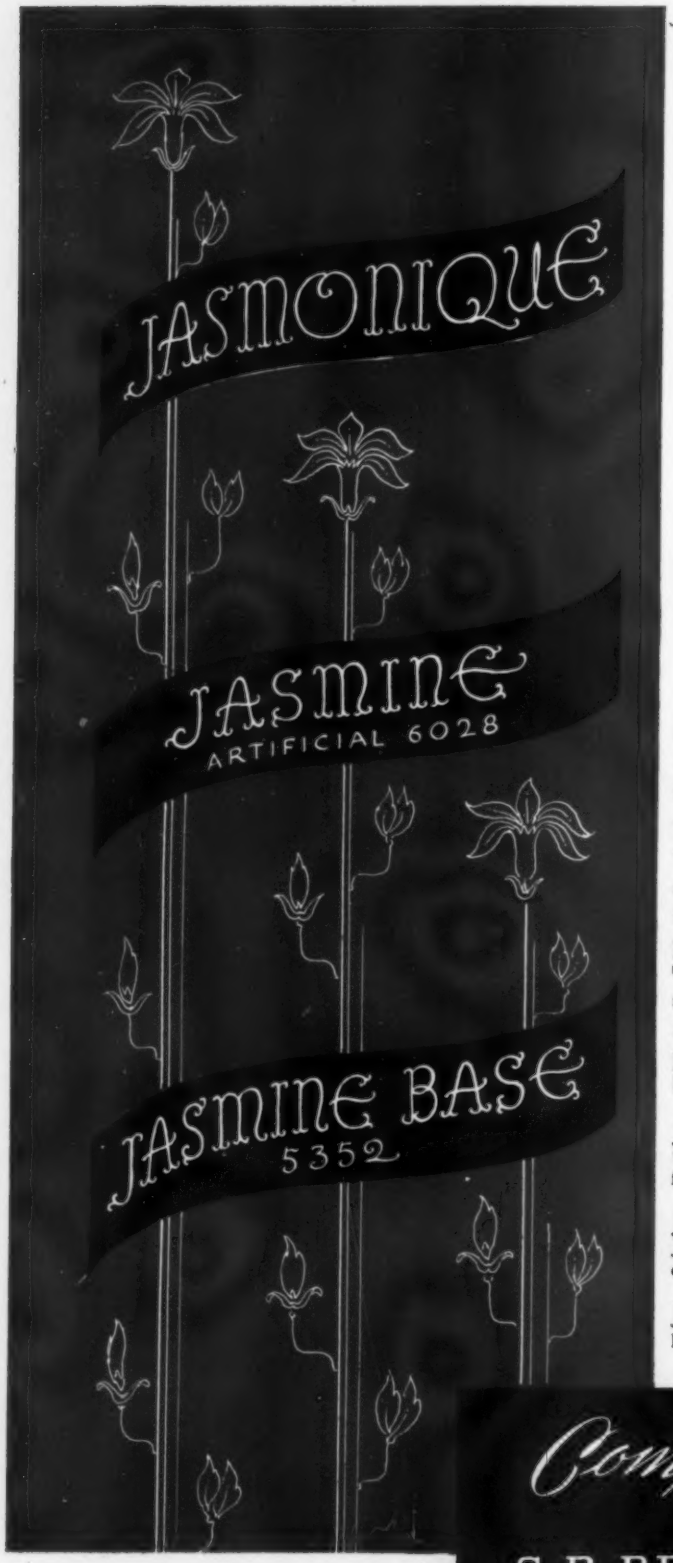

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Hooker Bulletin 328A, "Chlorinating Agents," gives more detailed information on the possible uses of these two Hooker products as well as other Hooker Chlorinating Chemicals. Technical Data Sheets Nos. 759 and 760 describe in more detail the physical properties of the Hooker Sulfur Chlorides. Copies of these bulletins will be sent when requested on your business letterhead. Your problems in handling these Hooker Chemicals will receive the careful attention of our Technical Staff.

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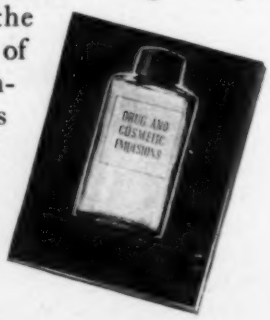

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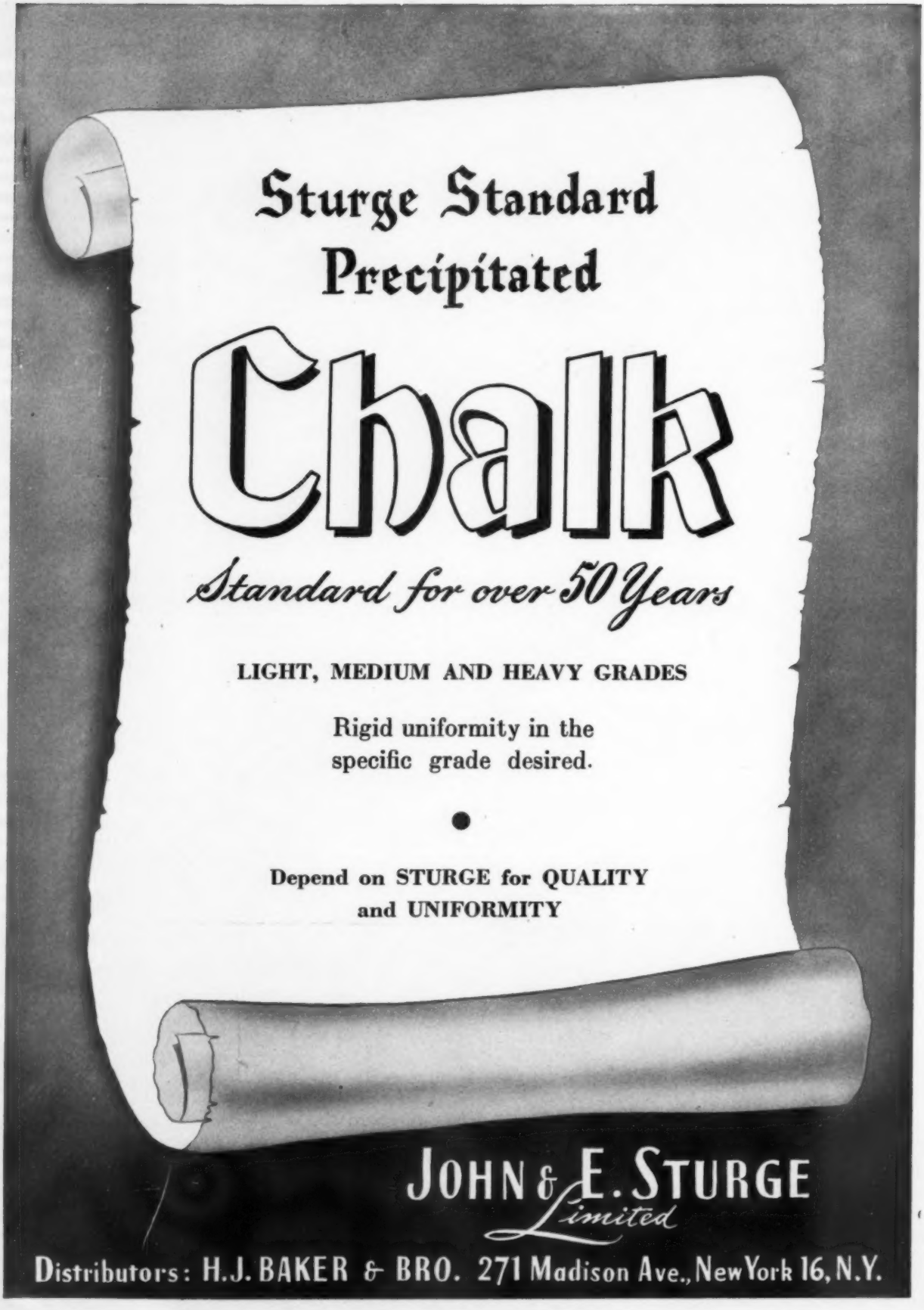
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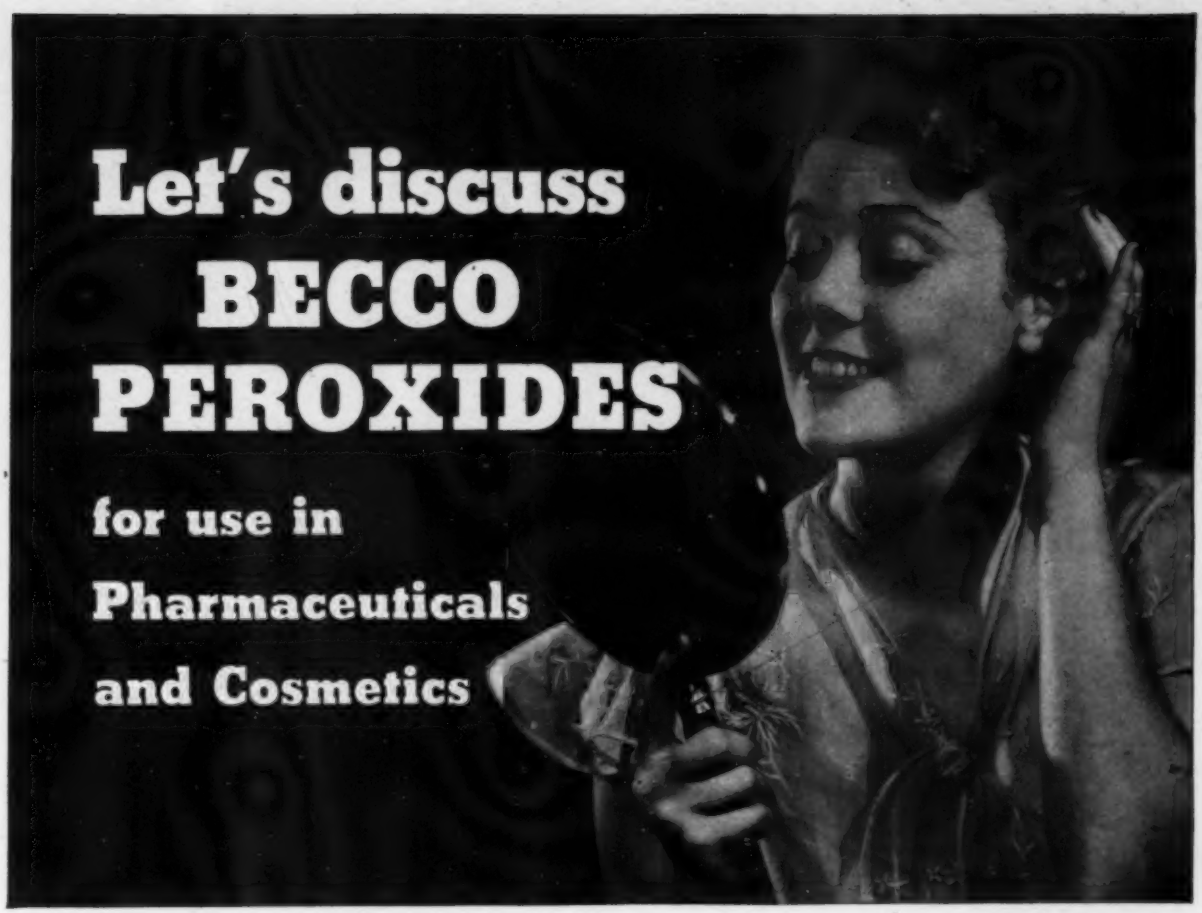

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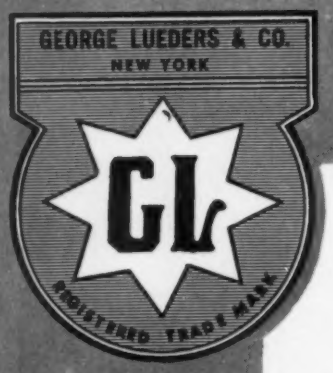

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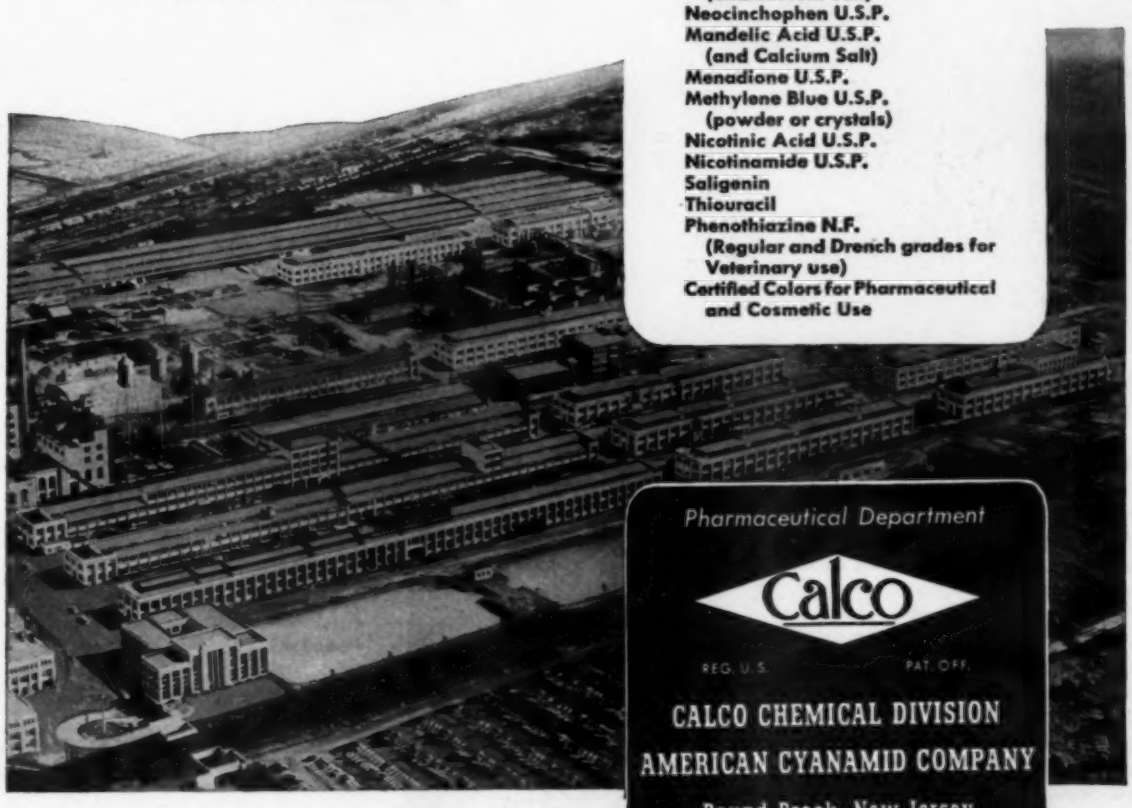

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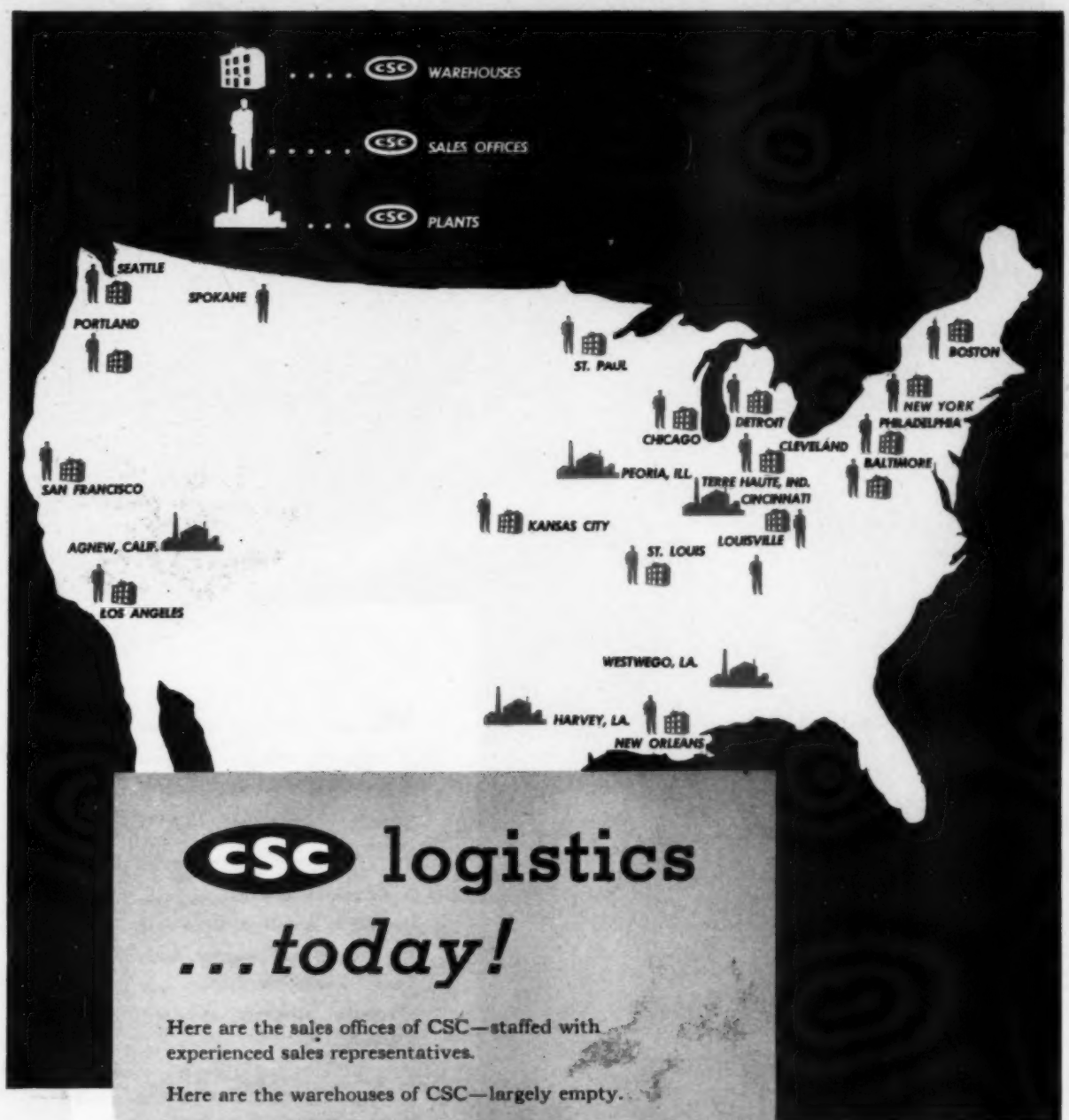

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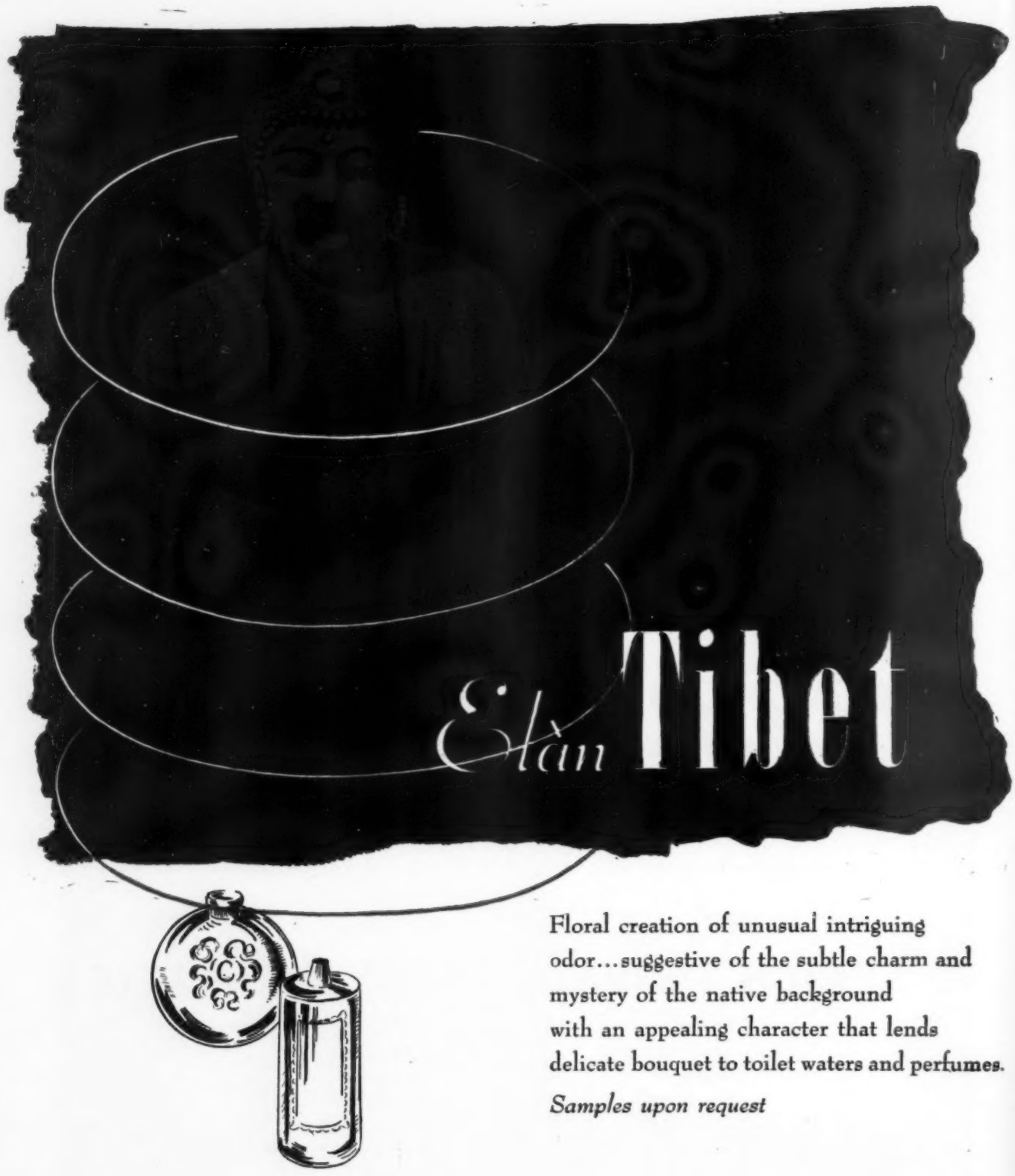

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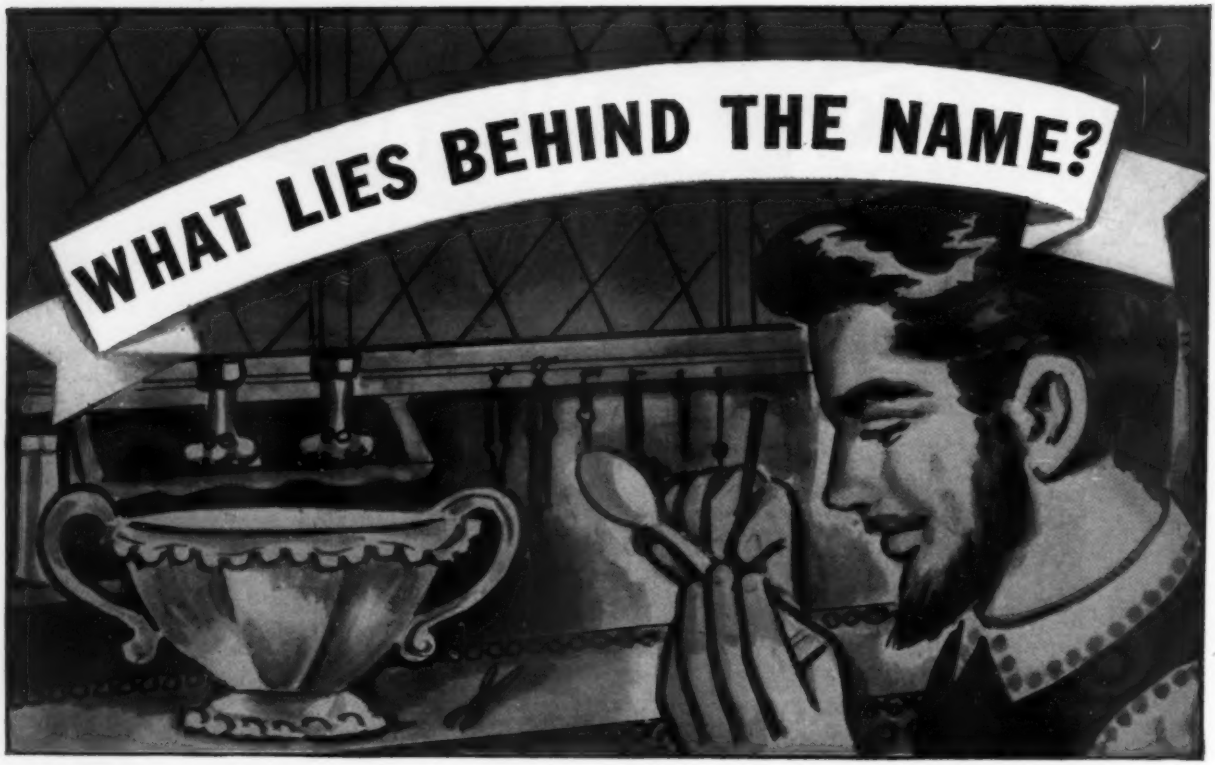

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The new odor successes in the perfume and cosmetic field will be based on these.

CUIRUSAL

Powerful aldehyde useful in floral and many fancy bouquets. (Russian Leather)

ALDEHYDE FK

Basis for Lilacs to create richer, stronger Lilac color. Add up to 100% Aldehyde FK.

RESEDALIA

A chemical surprisingly true to the odor of Reseda Mignonette.

TUBEROL

Basis for Tuberose odors and perfumes for creams, lotions, etc.

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A Ketone basis with Patchouly note for Violet Odors.

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Similar in odor to Alpha Amyl Cinnamic Aldehyde but softer and finer. Stable in soaps and creams. Basis for Jasmin Odors.

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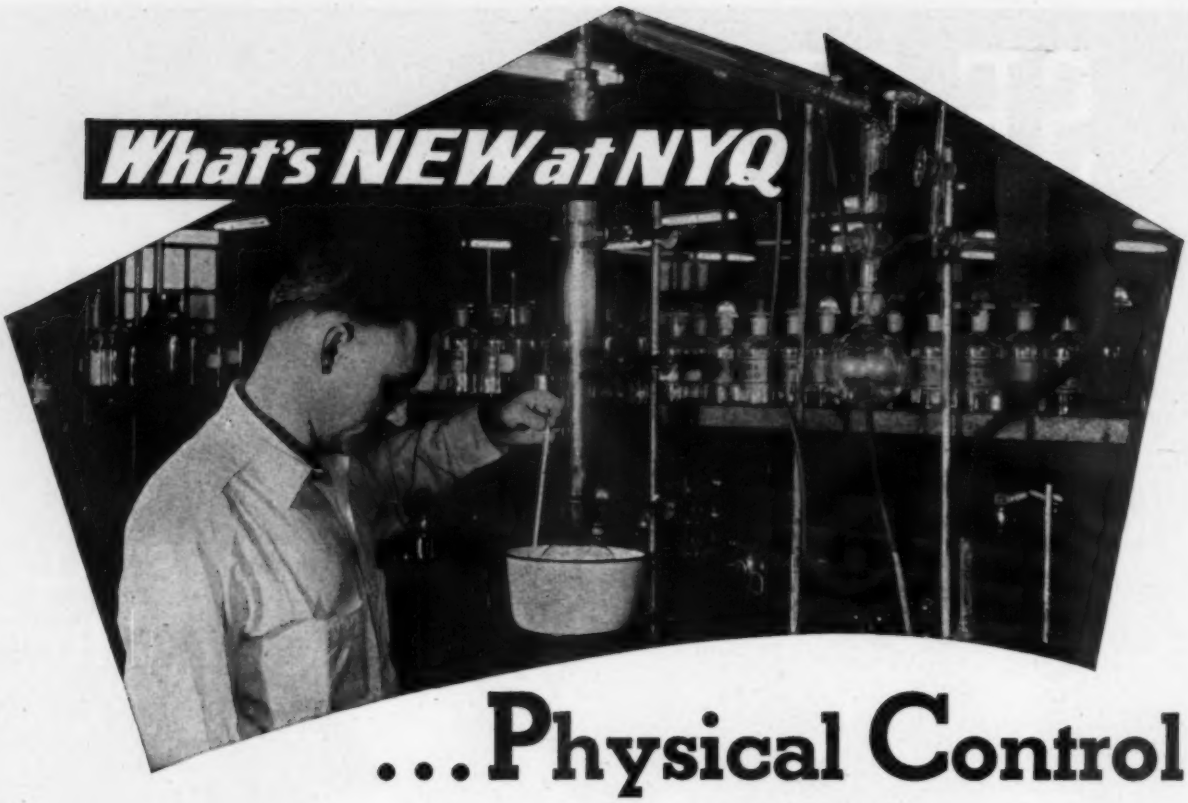

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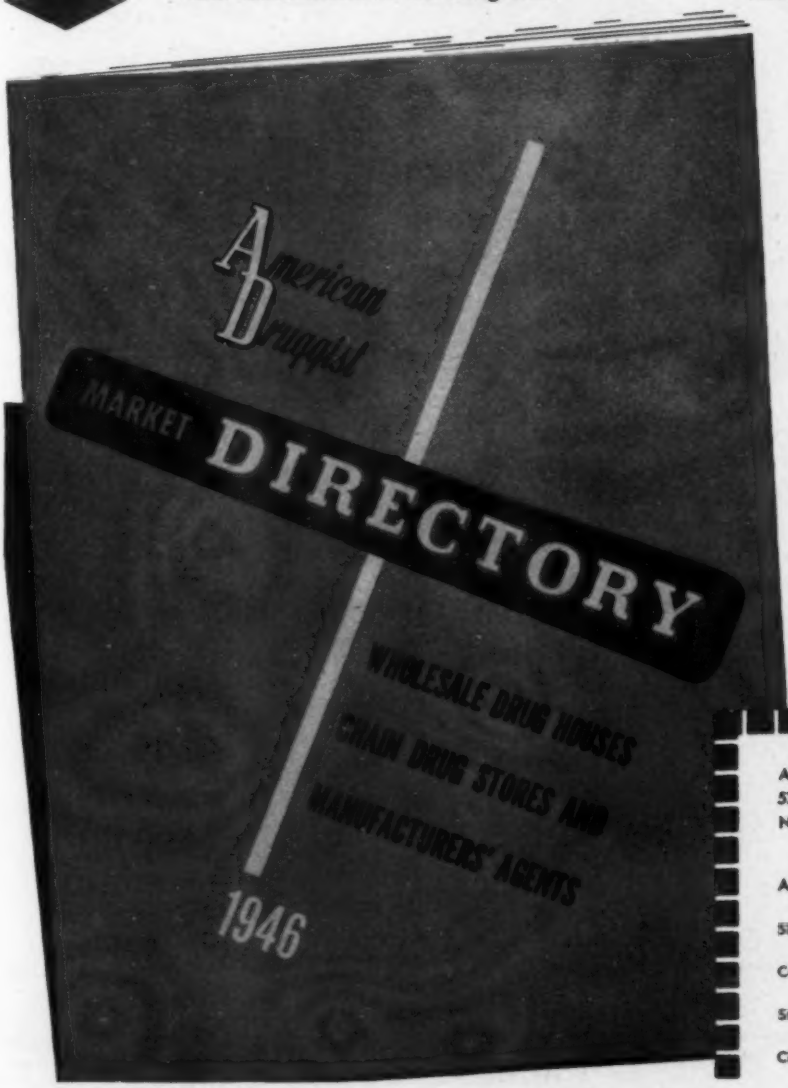

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This bottle contains 1 ounce perfume oil per gallon of 25% alcohol.
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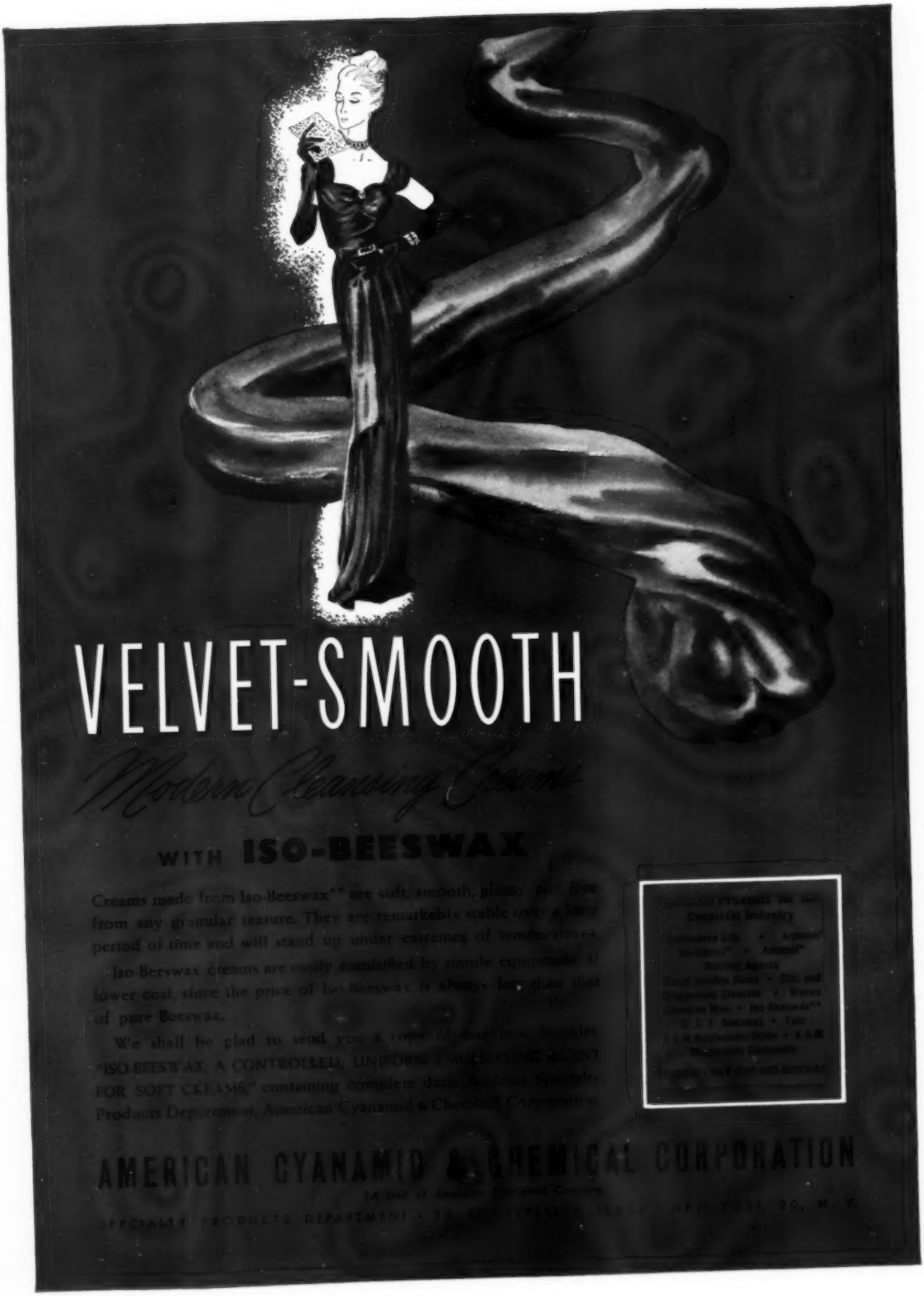
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INDISPENSABLE TO INDUSTRY

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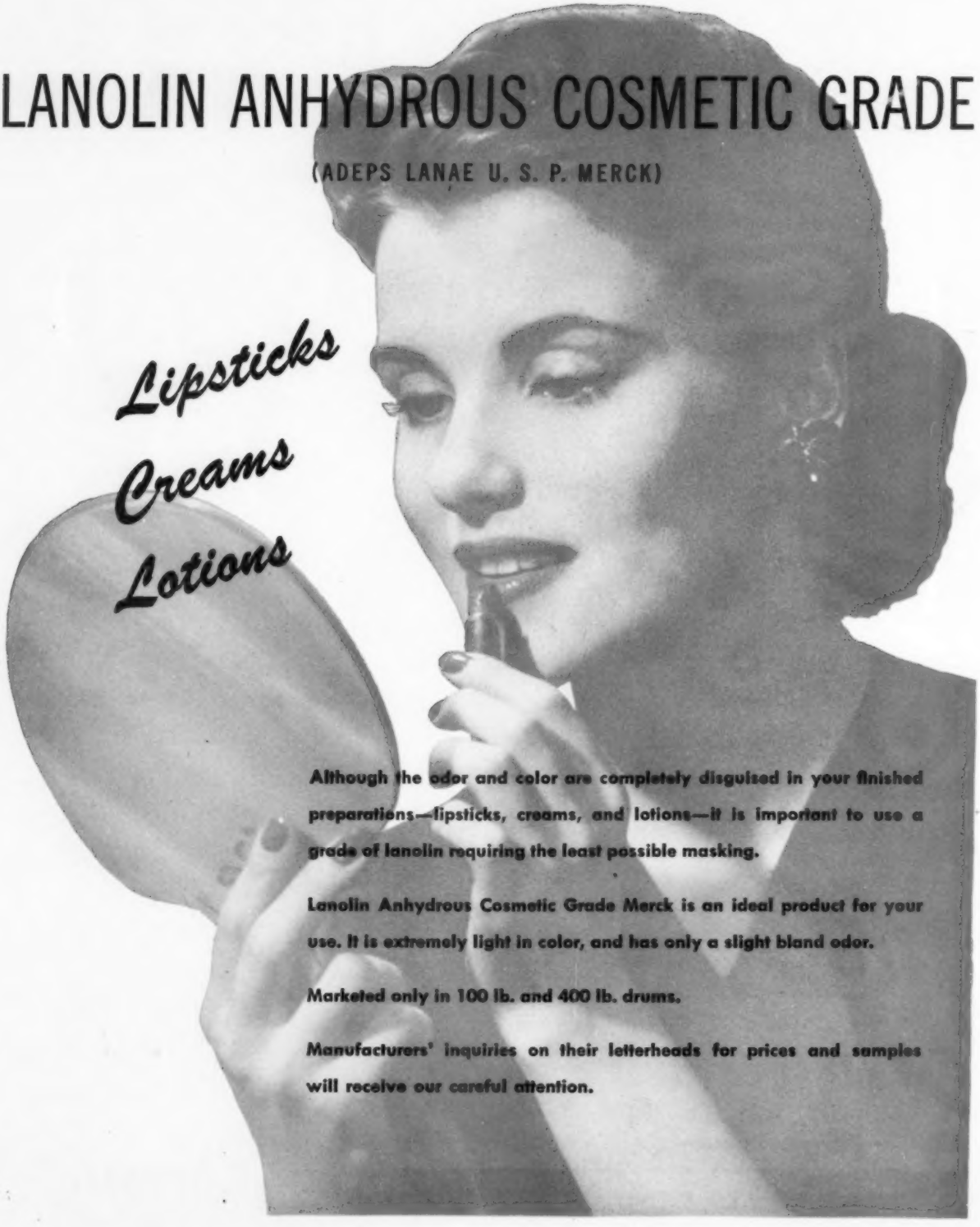

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Lanolin Anhydrous Cosmetic Grade Merck is an ideal product for your use. It is extremely light in color, and has only a slight bland odor.

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Despite the troubled times of the last 200 years, the House of Chiris has achieved a steady progress. Normally employing a staff of 7,000, the firm is now represented wherever Essential Oil production plants are to be found.

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Chiris' New York laboratories produce the finest aromatic creations which can be supplied under present conditions. The situation is improving rapidly. Not only has Chiris, New York, been able to import a limited number of essential oils and floral absolutes from France and French empire sources, but its activities in this country are progressing in line with the improved raw material situation.

We look forward to the future with confidence, fully prepared for the resumption of normal and expanding trade, and are ready with our experience, knowledge, and world-wide ramifications to serve the trade again as we have done in the past.

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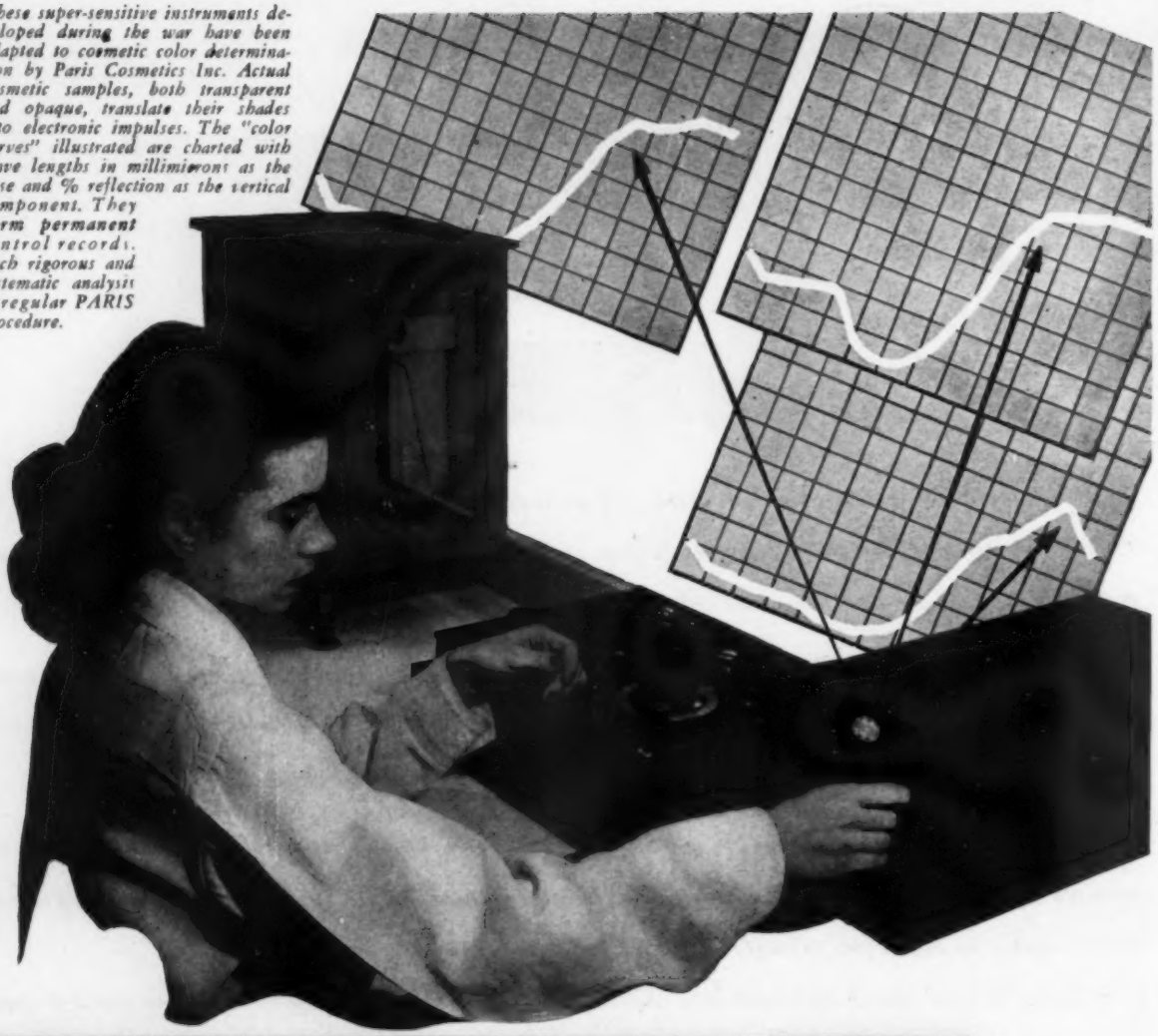
These super-sensitive instruments developed during the war have been adapted to cosmetic color determination by Paris Cosmetics Inc. Actual cosmetic samples, both transparent and opaque, translate their shades into electronic impulses. The "color curves" illustrated are charted with wave lengths in millimicrons as the base and % reflection as the vertical component. They form permanent control records. Such rigorous and systematic analysis is regular PARIS procedure.



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"Matching by eye" is now out when it comes to lipstick, powder, rouge and other cosmetic shades. Every color writes its own electronic signature as a mathematical graph in the Paris Cosmetics laboratory. Every time you try to match lipstick "smears" on the back of your hand or start checking the shades of new face powder shipments, think of what this modern advance means to you. It's another Paris extra added to the high quality standards and reliability so important to stylists and purchasing agents seeking to improve lines or individual items. Consult Paris Cosmetics Inc. without obligation for creative suggestions.

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EXCLUSIVELY UNDER PRIVATE LABEL —
LIPSTICKS • FACE POWDERS • DRY ROUGES • CREAM ROUGES
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All products fully covered by manufacturers' liability insurance

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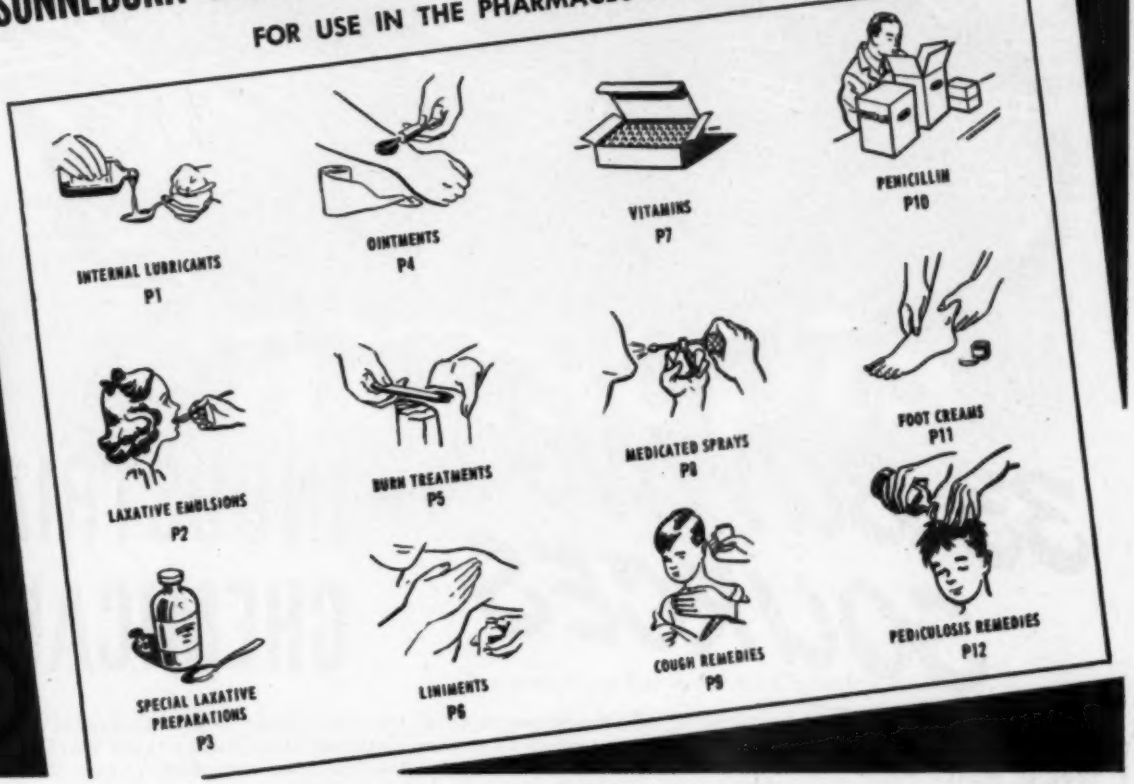
SONNEBORN White Oils, Petrolatums and Petroleum Specialties

FOR USE IN THE PHARMACEUTICAL FIELD



Leading pharmaceutical manufacturers have long standardized on SONNEBORN White Oils, Petrolatums and Petroleum Specialties . . . convincing evidence of the unsurpassed Quality, Purity and Stability of these highly refined ingredients, a few typical end-uses of which are shown above.

The broad research facilities of the SONNEBORN laboratories, backed by 65 years of refining experience, are available for aid in solving current production problems and in the development of new pharmaceuticals.

Check the coupon (marking appropriate key letters) to receive free technical data on subjects of most immediate interest to you.

White Oil and Petrolatum Division—**L. SONNEBORN SONS, INC.**
Dept. DC8, 88 Lexington Avenue, New York 16, N. Y.

Please send latest technical data on Sonneborn products for end-uses checked (refer to illustrations for key letters):

P1 P2 P3 P4 P5 P6 P7 P8 P9 P10 P11 P12

Name _____

Company _____

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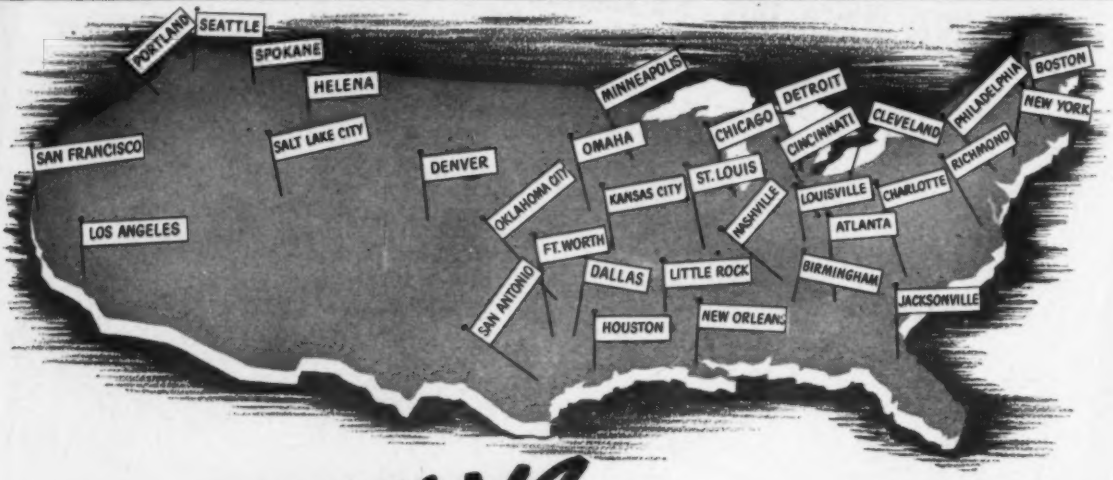

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Strontium oxides
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and most other chemicals

FROM acetone to xylol, the War Assets Administration is disposing of hundreds of surplus industrial chemicals at below market prices. To realize these savings for your business, write, wire or phone the nearest Regional Office, listed below, today. Items not available in your Region will be located for you through the special Inter-office Product Location service.

All items are being sold below current market price. Credit terms may be arranged. Make it *your* habit to check this source when your chemical stocks need replenishing.

All chemicals are subject to priority regulations. VETERANS OF WORLD WAR II are invited to be certified at the WAA certifying office serving your area and then to purchase the material offered herein.

EXPORTERS:

Most surplus property is available to the export market. Merchandise in short supply is withheld from export and if such items appear in this advertisement, they will be so identified by an asterisk.

FREE FACTS

War Assets Administration (address nearest Regional Office)
Please supply, without obligation, prices, available quantities and locations of items written in below:

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Dependable Chemicals by HEYDEN

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Parasepts*

. . . Preservatives for Products Containing Gums, Mucilage, Glue, Carbohydrates, Fats and Oils.

Heyden Parasepts are neutral esters of parahydroxybenzoic acid in fine white powder form. They are available for commercial use in pure and in technical grades of *Methyl*, *Ethyl*, *Propyl*, *Benzyl* and *Butyl* Parasepts.

Technical Data Sheets and other informative literature will be sent on request.

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Perfectly matched or blended odors in the same floral or spice family, ideal for Holiday and year-round gift ensembles can be especially prepared for you by the DREYER Perfume Stylist. Package them together or separately as a face cosmetic group, as a bath soap, powder and creme trio, or as a perfume and cologne unit. There are dozens of volume sales companion combinations. Ask us about them.

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ESSENTIAL OILS • AROMATIC CHEMICALS
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MEDICINAL WHITE OILS
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"Extra Light"—"Dense"

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ESSENTIAL OILS—Naturals—Synthetics
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"For years we have been serving manufacturers in our field. We know their needs, and are proud of the fact that our customers depend upon our experience and integrity in supplying their wants."

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Cortez and the meteors

When Cortez conquered Mexico, the Aztecs told him that they obtained their iron from heaven.

Cortez, of course, was incredulous and assumed that the Aztecs extracted iron from the ore. He discovered later, however, that they were completely ignorant of any method of extraction.

Actually, the Aztecs had told the truth. Their iron was not of terrestrial origin—but was of meteoric origin!

Modern research has shown that almost the only occurrences of metallic iron are as minute specula disseminated through basaltic rocks. In combination, it occurs in most natural waters, in plants, and as a constituent of blood. The variation of physical properties which attends on heating iron led to the view that it exists in allotropic forms. This has been proved by X-ray analysis.

Since 1867, every iron compound bearing the Mallinckrodt trade mark has been manufactured in strict conformity with Mallinckrodt's tradition of fine chemicals. **For iron compounds of uniformity and dependability, specify Mallinckrodt Iron Chloride, Citrate, Iodide, Nitrate, Oxide, Pyrophosphate, Phosphate, Subsulfate, Sulfate, Iron & Ammonium Citrate (Brown & Green), etc.**

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CHICAGO • PHILADELPHIA • LOS ANGELES • MONTREAL

UNIFORM • DEPENDABLE • PURITY

"Happy birthday, boss! The entire cake is made of Tinkle's Foundation Cream, Face Powder, Lipstick and Tooth paste!!"

KEEPING POSTED

Postwar Detail Staffs

ENLARGEMENT of the detail staffs of many pharmaceutical manufacturers is now under way. During the war period manufacturers generally were not able to keep their detail staffs up to their full quotas due to the manpower shortage. Also during that time a number of pharmaceutical manufacturers decided that when the war was over they would increase the size of their detail staffs beyond the prewar size. One manufacturer employing a detail staff of six hundred men—probably the largest of any of the manufacturers—was said to be planning a postwar increase to 800 or 900 men. Other manufacturers employing between 400 and 500 men seemed to feel that their staffs were not large enough and were waiting for the war to be over so that they too could increase their staffs.

All of which brings us to the pressure to be exerted upon the doctors by these larger detail staffs. We wonder how they are all going to get in to see the doctor and really accomplish something. Certain drug companies are always able to get their men into most of the doctors, while others have scant success. Naturally the ones who get in on their company names are the ones employed by companies with whose products the doctors are familiar and in whom they have confidence. Of course getting into a doctor very often depends upon the personality and resourcefulness of the detail man. But if all detail staffs are increased by some twenty to twenty-five per cent, it is difficult to see how the doctors of the country are going to have time to listen to what they have to say. And superimposed upon this general increase in prewar detail staffs are the detail staffs of the many new ethical manufacturers, and of the houses who, within recent years, have decided to join in the ethical trend. Perhaps the answer will be that medical journal advertising will be increased as it might prove cheaper than detail men for the results obtained. Direct mail advertising might also be increased but this seems to be just about as well saturated as a means of sales as is the detail man method.

Against State Medicine

POTENT arguments against state medicine were presented by Retiring President of the New York County Medical Society Dr. Roy B. Henline and by Associated Hospital Service of New York President Louis H. Pink, at the recent annual meeting of the society. Said Dr. Henline:

"The failure of the city government adequately to support its basic health services and the totally inadequate remuneration offered physicians, nurses, and other professional people in the Health and Hospital Departments is a sad commentary upon state medicine or socialized medicine as evidenced here in New York City.

"Surely, no unbiased person can study these conditions without asking himself the question, whether he would dare confide the control and supervision of medical services of all kinds and the operation of and destiny of our great voluntary hospital service to the government agencies, Federal, state, and local, in view of the record they have established in those services they already control."

And Mr. Pink said: "If the Federal government bogs down so seriously in finding a satisfactory solution on a national basis for transportation, coal, inflation, and the complaints of labor and management, should we not at least pause and think before committing a far more intricate and personal problem—the health of the people—to Federal management and control?"

Disease and Insect Sex Life

WE NOTE with interest that a plan to wipe out sleeping sickness in Africa is "within reach." The plan calls for altering the sex life of the tsetse fly, the insect responsible for the spread of the disease. The scheme calls for the cross-breeding of different species of the fly so that the resulting off-springs are sterile, much after the manner of producing mules which cannot reproduce. The "fly in the ointment," however is the problem of simulating the mating call of the tsetse fly, but this is just around the corner, according to reports. This is really quite a new and surprising type of research in the control of disease—the search to reproduce the mating call of insects.

Blind Prescribing

IT IS really surprising where organized medicine gets the gall to criticize self-medication in the face of the methods of prescribing employed by many members of the profession. The latest things used by the doctors in all cases in which they are not sure are the sulfa drugs and penicillin. A case in point: A mother of a four year old child finds the child has a temperature of 103° and calls the doctor. The doctor goes over the child thoroughly but can find no reason for the temperature, prescribes a sulfa drug preparation and leaves. The mother sees no reason to give the child the sulfa drug and the next morning the temperature was gone despite that none of the sulfa drug was given. Our only contention is that we can see no difference in this method of prescribing and self-medication except for the fact that the person employing self-medication has not access to drugs as dangerous as those which the doctor might employ in these blind stabs.

Smaller Cases—Less Handling

THE National Wholesale Druggists' Association is receiving excellent cooperation from manufacturers in reducing the sizes of shipping cases. Several manufacturers have already taken action including Lamont, Corliss & Co. (Pond's), the Mennen Company, and the Lambert Pharmacal Company. Zonite has announced its intention of repackaging Zonite and Larvex for as soon as corrugated material becomes available, having already established shelf packaging for Forhan's and Argyrol original packages. Many other companies are definitely interested. The purpose behind the reduction in sizes of shipping cases is to cut warehouse handling costs of the wholesalers by making it possible for the wholesalers to ship to a large part of the retailers the complete cases as received from the manufacturers. Many additional retailers will benefit by these changes, since the wholesalers pass on to the retailers who take case lots the saving effected through easier handling. The changes in sizes of manufacturers' shipping is a well worth while project for the reasons that it eliminates a large amount of labor on the part of the wholesalers, and also because it allows an increased number of retailers to buy in case lots and thereby realize a greater profit on their sales at the same time as they are carrying much better stocks.

Fluorine Now Available

FLUORINE, the most chemically active element known, is now being made commercially available for the first time by the Pennsylvania Salt Manufacturing Company. It is now being shipped in steel pressure cylinders on a limited commercial basis for experimental use by manufacturers and research men. Just what uses this newly available element will be put to is naturally unknown as yet. However, Leonard T. Beale, president of the producing company states:

"The possible uses of fluorine are so great, that we feel that the best scientific minds of the country should be given opportunity to develop them. It is for them—the chemists, researchers, and manufacturers—that we are making compressed fluorine commercially available in limited quantities."

Proprietary Assn. Ad Control

THE Proprietary Association has taken steps to expand its Advisory Committee on Advertising to include members of advertising agencies. This committee, which was created in 1935 as a means of improving conditions in proprietary medicine advertising prior to the enactment of the Wheeler-Lea Amendment to the Federal Trade Commission Act, has thus far consisted only of members of the Association, who have examined more than 100,000 pieces of advertising during that time. Because of changed conditions since the committee was first formed, the Association states "it is considered advisable to broaden this policy-making committee so as to include representatives of advertising agencies. Harvey M. Manss, vice-president of Sterling Drug, Inc., has been named the new chairman of the committee. Other members of the committee, which will "attempt to set up rules of decency in copy and make suggestions that will tend to eliminate disparging statements in advertising," are: Ben Duffy, of Batten, Barton, Durstine & Osborn; Richard Compton, of Compton Advertising, Inc.; William Resor, of J. Walter Thompson Co.; Louis Brockway, of Young & Rubicam; Harry H. Hoyt, of Carter Products; Robert Brown, of Bristol-Myers Co.; and Stanley Morrell, of Lambert Pharmacal Co.

More Salesmen in Union

THE DRUG Trade Salesmen's Union informs us that this Union has been certified by NRLB as the collective bargaining agent of all salesmen of Schieffelin & Co. July 8, by a vote of 17 for the Union and 2 for no union. Negotiations for an agreement will start shortly. The Union was recently designated as bargaining agent for the salesmen of McKesson & Robbins (Brooklyn Division), and D. Kaltman & Co., Jersey City wholesale druggist.

Watch Foreign Demand

THE GROWTH of the companies in this industry is something at which to marvel. However, a very part of this growth was the result of the large demands by the Government for war purposes, and is now the result of the increased income of this country resulting from the postwar boom. The postwar boom is also being substantially brought about by the enormous export demands resulting from the devasted condition of the other great production countries of the world. This export demand not only affects demand for the products of this industry by raising income here and thus multiplying the domestic demand, but it also affects the demand by heavy direct export inquiries for the products of this industry. When the other producing countries of the world are rehabilitated they will again become factors in world trade. Also within a certain length of time the present heavy world demand will shrink to more normal figures because of the fact that the demand for durable goods will be largely filled. For these reasons, manufacturers in this country should consider the importance of the export market on the terrific demand and boom that this country is experiencing, and they should obtain all possible information about the conditions of foreign countries as a guide to future business conditions here.

The Allergy Fad

THE medical profession is becoming increasingly aware of allergic conditions, but they are still in a quandry in many cases as to proper treatment or as to means of preventing reoccurrence of the attacks. Asthma and hay fever have long been regarded as allergic conditions, but asthma and hay fever still exist regardless of this knowledge and regardless of the facts that many sufferers from these diseases have been treated by doctors to no avail. It is for this reason that the medical profession as a whole, when they cannot easily diagnose a condition are quite apt to consider some allergin as the underlying cause. But the allergins are not often easy to trace down with the consequence that patients will have innumerable skin tests and will spend much time uncomfortably and receive a rather staggering doctor's bill quite often to no avail. This is one of the reasons why cosmetics are being attacked by doctors. The smart thing for a doctor to do nowadays when he is up against it, is to call the condition an allergic one and then lash out against anything that the person might be using whether it is cosmetics or anything else.

Increased Traveling Expenses

NATURALLY enough, as most manufacturers know from experience, salesmen's traveling expenses increased materially from 1944 to the present time. A survey of the American Management Association shows that these increases were greatest on meals, entertainment, and miscellaneous items. Of total expenses in the companies reporting, traveling increased 43 per cent, hotels 14 per cent, meals 18 per cent, and miscellaneous items 11 per cent. The survey indicates the need for more careful control of these expenses during the next few years.

Perfume Rackets

"PERFUME RACKETS" is the title of a booklet published by the Toilet Goods' Association to warn distributors and users of the misuse of trade-marks and trade names and also of the increase in counterfeiting of perfumes and other cosmetics. The Association has mailed copies of the booklet to cosmetic buyers throughout the country and copies are available to those interested.

Stay Out of the Drug Business

IN A recent case involving a veterinary remedy a decision was handed down that might just as well be applicable to human remedies and which should be noted carefully by all manufacturers or sellers of products coming within the scope of the Food, Drug, and Cosmetic Act. The product contained four per cent of potassium bichromate, two per cent of potassium iodide, alcohol and water, and was recommended as a cure for the disease blackhead in poultry. The FDA contended that the product was worthless, and the court fined the manufacturer $500 and placed him on a two year probation, the probation being conditioned upon the defendant getting out of the poultry business, as the Judge said that he was "not qualified" or such a calling. The manufacturer admitted that he was neither a pharmacist nor a chemist. We just wonder whether such a decision might be asked for in many other cases.

Shipping Cases for Retailers

TO GIVE the average retailer a break as compared with the few retailers who might be able to buy in relatively large lots and thereby obtain better price terms, the Mennen Co. conducted a study of the flow of their products to the retail trade through their wholesale distributors to determine better shipping case sizes. As a result of the investigation, Mennen now announces that shipping case sizes will be changed to make it possible for a high percentage of the retailers to buy in full shipping case quantities from the wholesalers. Mennen will continue to pack in shelf cartons within shipping cases.

Doing Our Best

THE shortage of paper being what it is, please do not fret if our publication is late in arriving during any particular month. It is hard enough to be able to buy paper in the first place, and then, with mills far behind in delivery, it is still more difficult to get it into the printer's plant in time to make the publication date. Not so long ago it was our printer and his shortage of labor that was giving us no end of trouble. Now that problem has been solved but the paper shortage causes us the same trouble. We are doing our darndest to correct the situation but it will apparently be some time before we can be really straightened out.

Pharmaceutical Brand Names

APPLYING the practice of different brand names for the same drug to coffee, Dr. David L. Thomson, Professor of Biochemistry and Dean of the Faculty of Graduate Studies and Research, McGill University, speaking at the A.P.M.A. banquet, said:

"A few minutes ago the waiter asked me if I would take coffee; and I had the pleasant picture of him putting the same question in appropriate terms to each manufacturer present, and giving him the self-same brew a score of proprietary names: Squibb-nibs, Mercka-mocha, Cupjohn, Armouroma, Percolilly."

Don't Sit Down!

ANOTHER humorous but interesting observation of Dr. Thomson is the following: "Did it ever occur to you that our language is full of suggestions that it is a privilege to work sitting down? We respect our Chairman; we honor the throne; we speak of a Professor's chair, a seat in parliament, an Archbishop's see, as the crown of a career. The lawyer looks to the judge's bench, and so too the Turks spoke of their Divan, and the Hebrews of the Sanhedrin, all in the same sense. All this betokens a state of mind, of respecting the man who does his work sitting down. Most kinds of research, however, are done standing up, or at best perched upon a laboratory stool. Distrust the man who says he can do research from his desk by issuing orders to his technicians; such a man will never find anything that he does not expect to find; for Nature is a demure and well-mannered lady, and when she is disposed to reveal one of her secrets she lets the veil fall only for a moment, as if by accident, and without announcement in advance. Distrust yourselves, too, when you catch yourselves thinking that it is a promotion to take a good man out of the laboratory and make him a second-rate executive in an office."

The Value of Trade-Marks

EDWARD S. ROGERS, famous trade-mark lawyer and Chairman of the Board of Sterling Drug., Inc., recently delivered a strong address in favor of trade-mark system. Some of more interesting statements were:

"Trade-marks are symbols of good will and good will is good repute. By good will I do not mean the conventional legal abstraction, but the reality. Good will is collective friendliness, the desire to deal with one rather than another. It is what makes tomorrow's business more than an accident. As Mr. Justice Holmes once put it, 'Good will is the inclination to return to where you have been well treated.' But unless the place can be identified how can you find it again? As applied to goods, good will is the inclination to buy again the thing you liked before.

"A trade-mark is a mark which in trade enables buyers to tell competing goods apart. But trade-marks are also a liability because the user of them stakes his reputation for better or for worse on his goods; for, good or bad, they can be identified as coming from him. He gets the credit if they are good and the discredit if they are bad. Thus trade marks are symbols of individual responsibility. They are the guarantee of the maker of the goods bearing them of identity and quality.

"What if goods we buy were not marked with the name or brand of the maker, or seller? Anonymous goods would be as reliable as an anonymous letter. Deprived of the handy tool of trade-marks to designate what we want, we would be compelled to describe everything according to government specifications. Did you ever read a government specification?

"Would you rather depend on such a specification or trust to the maker's good sense to have the product he puts his trade-mark on the best he knows how to make? Who would be more likely to know what a good product is than the man who makes it and stakes his business future on its being good? Who would likely be the better judge, this man or a self-styled liberal in Washington?"

Estrogenic Creams Okehed

HORMONE creams containing estrogenic substances have been approved for sale in the State of Louisiana where they were banned since last January. This is the third instance of the removal of a ban against these creams. The other two actions against the sale of the creams which were later removed, occurred in the State of Virginia and in the City of New York. Evidently the evidence presented in favor of the permitted use of these creams is very conclusive that the creams are not harmful despite the repeated attacks against the products still made by Dr. Morris Fishbein of the American Medical Association. Likewise, this action of rescinding the ban against these products in these instances speaks well for the officials of the Food and Drug Administration which body has never taken any action against these creams despite all the ranting and raving of Fishbein and others like him. The new regulation of the Louisiana State Board of Health covering these creams reads:

"No cosmetic or beauty preparation containing as one of its ingredients estrogenic hormone, or any of its chemical derivatives, or any synthetic chemical product possessing properties similar to those of estrogenic hormone, may be manufactured, processed, packed, sold or distributed in Louisiana unless its label bears adequate directions for use and a statement of the quantity in units of such ingredient contained in each ounce of such products."

Manicures in France

IN A report on the French cosmetic industry by Guy Elie-Mantout, who represents Peggy Sage in Paris, it is pointed out that cosmetic manufacturing "is at low ebb in France, as the Government insists that manufacturers devote five parts of all raw materials to export manufacture, and only one part for domestic consumption. Materials are granted on that basis." In the Peggy Sage salon, which is the only Paris salon devoted exclusively to manicures, 24 manicurists serve 150 to 200 clients a day, and nearly 200 are turned away daily. Demand for manicures was so heavy that appointments had to be made two months in advance. Mantout explains this heavy demand: "Perhaps it is a small thing, but when the women of Paris had no soap, no creams, no way to make themselves womanly, the fact that they could have an occasional manicure had an amzaing effect on their spirits." He points out that "A French woman is more interested in having the polish complement her skin tone than she is in having it as an accessory to her ensemble."

The Speedy Cough

THE velocity of a cough has been measured by scientists who claim that it travels at more than 245 miles an hour when it leaves the mouth.

A. P. M. A. Pacific Coast Section

THE American Pharmaceutical Manufacturers' Association, which some years ago became international by inviting Canadian members to join, and which more recently set up Eastern and Western Sections to hold meetings on production and sales problems, has now created a Pacific Coast Section. F. L. Henning, of Nion Corporation, has been elected chairman of the new section; Leland Quick, of E. S. Miller Laboratories is vice-chairman; and Harlow B. Boyle, of Boyle & Co., is secretary-treasurer. The Association requests approval of the Pacific Coast Section on any new prospective members from the West Coast area. The new section has set up various committees as with the following chairmen: Production Committee, E. P. Reason, of Miller Laboratories; Sales and Advertising Committee, E. H. Canwright, of Harrower Laboratories; Program Committee, C. E. Boyle, of Boyle & Co.; Membership Committee, E. D. Wright, of Nion Corporation; Publicity and Legislation Committee, K. P. Pattengill, of Don Baxter Laboratories.

Time To Organize for Future

IT IS high time that some action was taken within this industry toward bringing into being a general overall organization that could really accomplish something. The National Drug Trade Conference is all right as far as it goes, but it does not go far enough. This is for the very simple reason that the Conference needs a unanimous vote of its delegates before any action can be taken regarding abuses or other problems facing the industry. At the present time everybody is too busy trying to fill all the orders that just keep rolling in with comparatively small effort. When business is good, why worry about those things? The reason why we should worry now is so that we should be prepared to solve the problems that are bound to arise quite suddenly when business begins to slide. When business is poor, trade abuses occur and then action to correct them is essential. But under such conditions nobody will surrender any of their rights to any organization that is going to seek to control them. The time to get these people to surrender these rights to a properly organized body is now when business is good and when people are not in the state of mind that they will be when business is hard to get and must be gotten by fair means or foul.

Maine Cosmetic Tax

THE State of Maine has enacted a bill calling for a five per cent retail tax on cosmetics. The bill, which was passed by the legislature and signed by the governor of the State, must get final approval by a referendum of the voters at the Maine general election in September before becoming effective. The proceeds are to be applied to the payment of a veterans' bonus. The original bill providing for the tax as enacted was originally defeated by the legislature and a bill for a general sales tax was substituted for it. However, such strong opposition appeared against the general sales tax, the original bill was reintroduced and passed. The part of the bill of interest to this industry reads:

Section 248. Tax on toilet preparations. There is hereby imposed upon the following articles sold at retail a tax equivalent to 5 per cent of the price for which sold, exclusive of federal taxes: perfumes, essences, extracts, toilet waters, cosmetics, petroleum jellies, hair oils, pomades, hair dressings, hair restoratives, hair dyes, aromatic cachous, toilet powders and any similar substances, article or preparations by whatever name known or distinguished, any of the above which are used or applied or intended to be used or applied for toilet purposes.

Toilet cases and other cases, bags and kits, without regard to size, shape, construction, or material from which made for use in carrying toilet articles or articles of a wearing apparel.

Black Market Quotation

AN interesting price quoted by a black market operator recently was $200 per ounce for an alkaloid which is normally priced at about $3.50. This operator said he had 75 ounces available, while legitimate sources had none to offer.

Individual Bargaining

IF A proposed amendment to the Federal Constitution were adopted, an individual could bargain individually and would not necessarily have to work through some union of which he wants to be free. The amendment was reported favorably by Senate Judiciary Committee by a vote of 8 to 3. The amendment, described by Senator Charles O. Andrews of Florida, as "An Eleventh Article in the Bill of Rights," reads:

"The inherent right of a person to work and bargain freely with his employer, individually or collectively, for terms and conditions of his employment shall not be denied or infringed by any Federal or State law, or by any organization of whatever nature."

Chemical Control Essential

AS A reminder that chemical checks and controls of raw materials are essential on the part of the drug and cosmetic manufacturers so that they may be certain that the raw materials for what they are labeled to be and not something else or of an improper grade and purity, a court decision in a case brought by the Food and Drug Administration contained the following statements:

"It is fundamental that the purpose of the Act is to protect the consumer. Public policy casts upon those who introduce foods, drugs, and cosmetics into interstate commerce the duty of rigid inspection. They are charged with absolute responsibility for proper branding of their products. Public safety demands of them not only extreme care but definite assurance of the quality of their products.

"It is the judgment of this court that no person may rely upon any guarantee unless, in introducing the product into interstate commerce, he has acted merely as a conduit through which the merchandise reaches the consumer.

"The protection of the exemption clause of the statute does not include within its ambit those who, in any way handle or process the product to which the guaranty attaches, if one has been given.

"The guaranty can be received in good faith, within the meaning of the statute, only if the shipper passes the product on in the same form as he receives it, without repacking it or subjecting it to any new hazards of adulteration or failure which were not present when the original guaranty upon which he relies was given."

Jesse L. Hopkins

IN THE passing of Jesse L. Hopkins, whose death occurred last month, there is removed from the drug industry a man who has been an outstanding figure for a long span of years. While Mr. Hopkins never told his age, and refused to have age discussed when he was present—saying that a man's age is only hearsay and that he himself does not definitely know—his age is given as 86 years although many believed that he was at least 92. Mr. Hopkins established J. L. Hopkins & Co. 55 years ago and was the active head of the business until his death. He married in 1880, celebrating his 50th wedding anniversary in 1930. Mrs. Hopkins died in 1935. Mr. Hopkins, through his striking personality and long business career was known to drug manufacturers and drug wholesalers everywhere.

DR. MORRIS FISHBEIN, generally referred to as "official spokesman" for the American Medical Association—a title which he has often denied—but technically holding the positions of editor of the Journal of the A. M. A., and of the Association's lay publication—Hygeia—seems to be engaged in an all-out drive to smear the cosmetic industry and to blame all of the ills to which flesh is heir on the use of cosmetics. This is not an entirely new role for Dr. Fishbein, but formerly he just took it in his stride along with his attacks on the drug manufacturers. But now he seems to be devoting an increasing amount of time and energy to his attacks on cosmetics and it appears to be his major project so far as public attention is concerned.

There is no denying Dr. Fishbein's great brilliance of mind, his intense energy and industriousness, and many other outstanding attributes. But like any other man in public life, Dr. Fishbein often has to make a quick shift to divert public attention from one subject upon which it is focused to something else of less importance but of great popular appeal. Public attention has recently been focused sharply on the question of state medicine or compulsory sickness insurance operated by the Federal Government. The more sharply this attention was focused, the less important seemed Dr. Fishbein and the American Medical Association, who were dubbed reactionaries in medicine. Now, by his attacks upon cosmetics, perhaps the Doctor hopes to convince the public that the A. M. A. is a progressive organization which is constantly on guard in the interests of the health of the public. By building up publicity in the direction of smearing cosmetics, Dr. Fishbein probably hopes that the general public will discuss the dangers of cosmetics and the value of the A. M. A., rather than the question of medical services furnished by taxation.

Through the Journal of the A. M. A., Fishbein has a long history of fighting not only frauds in medicine, but also of fighting the rank and file of drug and pharmaceutical manufacturers for their advertising and labeling. But within recent years these attacks have dwindled and today even the restrictions of the Council on Pharmacy and Chemistry of the A. M. A. have been softened to the extent that brand names are permissible for pharmaceuticals, and advertising is permitted to a greater degree than was formerly the case. After all, there is little reason why the Doctor should attack the drug and pharmaceutical manufacturers any more. The Federal Food, Drug, and Cosmetic Act has greatly strengthened the control over the products of these manufacturers, and the advertising of these products is

Fishbein and Cosmetics

The products used for the cold permanent wave process came in for direct attack in an article in the June 15 issue of the A.M.A. Journal. Two weeks later an answer to the article appeared and in the same issue an editorial straddled the question of whether or not the cold wave processes are harmful.

strictly controlled by the Federal Trade Commission. Also these manufacturers are practically all engaged in intelligent research which is largely conducted by members of the medical profession. In fact, cooperation between the drug and pharmaceutical manufacturers and the A. M. A. now stands at the highest point in history and it is still improving. Actually the pharmaceutical manufacturers—and many proprietary manufacturers and pharmaceutical manufacturers are now owned by the same parent companies—have gone strongly to bat financially to help the medical profession defeat the proposals for Government compulsory sickness insurance, and one can not overlook this kind of support.

So if drugs and pharmaceuticals cannot be generally smeared, what's the matter with cosmetics? After all, practically all women who can read use cosmetics to some degree or another, and, like the old maid, even if they can't have it, they like to talk about it. And women will talk about this subject to the extent that men will be forced to listen to the great work that the A. M. A. is doing in guarding the weaker sex against the dangers of cosmetics. So cosmetics are now getting it full force, even to the extent that Dr. Fishbein recently stated before the National Association of Chain Drug Stores that "all cosmetics are potentially dangerous, due to the increasing incidence of allergies."

Several years ago Dr. Fishbein spread over the newspapers of the country a statement regarding a cream containing the female sex hormone. This attack received such wide attention that department stores discontinued the product attacked and one prominent New York department store returned the full price for any jars that were brought in full, partially full, or practically empty. The manufactuerr of this cream sued the A. M. A. with the result that the product is question was restored to the market and today is a large seller with numerous competitive products containing the same estrogen. In the attack the A. M. A. talked glibly of the cream causing cancer. The latest direct attack is upon the products used for the cold permanent wave process. The A. M. A. Journal of June 15 contained an article by Dr. Lawrence H. Cotter, of New York, entitled "Thioglycolic Acid and Poisoning in Connection with the 'Cold Wave' Process." This article reported upon five cases, "selected from a large group (number not stated) because it had been possible to demonstrate their lesions in the laboratory." In the June 29th issue of the Journal, there appeared a letter written by Dr. Carey P. McCord in answer to the article by Dr. Cotter which appeared two weeks earlier. In this answer Dr. McCord states:

"At least one manufacturer to my knowledge has procured elaborate testing (1) to establish the degree of primary irritation of thioglycolic acid at various percentage levels, together with any similar effects of the alkaline derivatives as actually used in cold wave preparations, (2) to determine the possibilities of sensitization through repeated patch tests carried out at such intervals as are appropriate to the causation of sensitization (3) appraisal of circumstances under which hydrogen sulfide is produced in the original thioglycolic acid and the procurement of stabilizers preventing this occurrence and (4) elaborate animal experiments in which thioglycolic acid and subsequently produced

(*Continued on page 286*)

Of all the vitamin groups the multivitamins seem to be showing the greatest dollar gain.

THE PRESENT STATUS OF VITAMINS

It is estimated that vitamin products now outsell all other product groups in drug stores. A recent survey shows only a 1% increase in the total vitamin business, but a 5.4% gain over the previous year in the drug store. Thus the bulk of vitamins are being sold through the logical channel—the drug store. All other outlets—mail order houses, department stores, industrials, grocery stores, etc.—are off.

A look at the estimated vitamin sales figures from 1942 through 1945 show the vitamin business increasing at a decreasing rate—which is probably to be expected.

1942	$135,896
1943	179,850
1944	182,643
1945	184,423

Drug & Cosmetic Industry has this year, as in the past, been studying the vitamin picture with a great deal of interest. We have conducted surveys among a cross-section of drug manufacturers and suppliers as well as making spot check studies of busy prescription pharmacies.

Survey of Manufacturers and Suppliers

A questionnaire was sent out to a representative cross-section of twenty-four pharmaceutical manufacturers and suppliers of vitamin products. The following summary is based on returns from twelve (50% response).

Multi-vitamin Products

Question 1—What is the trend of your multi-vitamin product sales?

9 up
3 levelling off
0 down

Question 2—How do your multi-vitamin sales compare to 1945?

12 ahead
0 the same
0 behind

B-Complex Products

Question 3—What is the trend of your B complex product sales?

7 up
3 levelling off
2 down

Question 4—What is the 1946 B complex sales picture as compared with 1945?

7 up
2 levelling off
3 down

Vitamins A & D Products

Question 5—What is the trend of your A & D product sales (excluding cod liver oil)?

2 up
3 levelling off
5 down
1 up slightly
1 not in this field

Question 6—If you sell cod liver oil, what is the current sales trend in view of the increasing new baby population?

0 up
4 levelling off
2 down
6 do not sell

Question 7—How do your A & D product sales (excluding cod liver oil) compare with 1945?

2 do not sell
5 up
2 levelling off
3 down

Drug Store Spot Check

A check of over three hundred busy prescription pharmacies revealed that their 1946 vitamin business (for the first six months) was ahead for 267 and off for only 52. The percentage gain over 1945 ranged from five to twenty-five per cent. The majority reported an increase from five to ten per cent over the previous year.

In checking the origin of vitamin sales we have come up with overwhelming and conclusive evidence that the physician is the key to the vitamin market. By presenting or suggesting vitamins the physician is the controlling factor in the sale of most vitamin products.

Of particular interest was our query regarding the most popular multivitamin products. Those who know their vitamins probably could name them:

(1) Unicaps—Upjohn
(2) Multicebrin—Lilly
(3) Vitacaps—Abbott
(4) Vi-Magna—Lederle

Unicaps and Multicebrin, in particular, seem to have corralled a rather large share of the multivitamin business. In fact, of all the vitamin groups the multivitamins seem to be showing the greatest dollar gain.

The B-Complex products have been steady sellers for some time. While the potential market is not as great as for the multivitamins it is encouraging that there are definite signs that sales at the retail drug store outlet are continuing upward, though at a decreasing rate: Lederle's B-Complex, Squibb's B-Complex, Lilly's Becotin and Parke-Davis's Combex are leaders in the race for the B business.

Vitamins A and D preparations have long been used by the public. The sales trend, however, is toward multivitamin medication—both for adults and children. While A & D business appears to be a little ahead of 1945 it is probably safe to say that as time goes on the multivitamins will take more and more of this market. As might be expected Mead-Johnson's Oleum Percomorphum, Upjohn's Super D, Lederle's Vi-Delta Emulsion and Squibb's Cod Liver Oil lead the field.

Vitamins in Canada

The fourth annual drug store survey made by the Canadian Pharmaceutical Association showed that for 1945 the drug stores in Canada rolled up another record volume although the rate of increase was less than that from 1943 to 1944. For 1945 it is estimated that the Canadian drug stores did approximately $160,000,000 worth of business. This is based on returns from over 300 stores or about 8% of the total number in Canada.

The total amount of vitamin business showed a con-

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Lipstick Formulation

By JOSEPH KALISH*

As IN virtually all cosmetics, quality in lipsticks is a combination of objective and subjective effects. For example, the woman's reaction to the color, odor, and taste of the lipstick is largely subjective and what will please one will alienate another. Nevertheless, there is a large region in which generalities, more or less circumscribed, are applicable.

The taste of the lipstick should be neutral; the fatty odor and taste of the lipstick base must be covered, yet the stick must not have a persistent, intrusive taste, making the wearer conscious of her lipstick. Nor should the lipstick smell like a perfumer's dream: the ideal would seem to be an attractive, indefinable odor in the stick as smelled in the case, but again no noticeable odor after application. Attractiveness of color, based largely upon current style and promotional impact, and affected by personal predilection, can be considerably affected by formulation. Top shade, shade on the lips, and residual tone after wear should be as nearly identical as possible. The shade itself should be, as a rule, clean, without brown or grey tints.

From here on, lipstick quality can be correlated with objective characteristics, not necessarily capable of quantitative measurement. These include consistency, texture, ease of application, deposit on the lips, luster, indelibility, odor, taste, color, shelf life, and workmanship.

As regards consistency, the lipstick must obviously not be too soft, or it will smear and break on normal application; if it is too hard, it will give an unpleasant effect when applied even if it spreads readily. Melting point is an additional quality to be watched but it can easily be over-emphasized; it is not difficult to formulate a stick that will not be unduly soft in hot weather, but an extremely high softening point is meaningless.

Texture of the stick must be non-granular and completely smooth so that the non-homogeneous mixture acts like a homogeneous whole. Of extreme importance are the application properties of the stick, which must go on the lips easily, smoothly, evenly. At one extreme, the stick may actually feel dry as it touches the lips, considerable pressure being necessary for application, there will be much drag and the stick may even be deposited in small lumps. At the other end of the scale, application is too easy, to the extent that a heavy mass

*Chief Chemist, Helfrich Laboratories of New York, Inc.

is deposited on the lips, lipstick tends to smear over the surrounding area, and does not adhere well. Ideally, application should be very smooth, with a definite but small amount of drag to prevent the stick from slipping during application. The resulting film should have a small degree of tackiness to improve adhesion, should not be too oily or waxy in appearance or feel, and must not eventually accumulate in lip folds and crevices.

As seen when purchased, the lipstick should preferably have a relative high degree of luster, but too much shine on the lips tends to give an unnatural effect which is undesirable.

A high premium is placed upon indelibility, but this refers to adhesion of the lipstick mass as a whole, not merely to the bromo acid stain left after the waxes and oils have left the lips.

Uniformity of lipstick quality from the consumers' point-of-view depends not only upon the care taken in manufacture, which must be axiomatic, but also upon the shelf-life of the product. Since shelf-life literally means the length of time the lipstick retains, without any change, its original properties and qualities after it has left the manufacturer's hands, the item must not only resist bacterial and oxidative action, but must also retain its original application properties, despite the vicissitudes of shipping and storage.

Finally, the all inclusive "workmanship" is a strong determinant in original and repeat sales, and includes everything about the lipstick from its cardboard container to the behavior of its last fraction of an inch. From the moment the woman sees the lipstick it must look as if it is well worth its purchase price and it must act accordingly. The final product must be scrupulously clean; the stick must be free from grit and holes; it should not show any molding marks; it should be flamed properly, the visible length of the stick without overflaming; the case itself should be well-balanced in the hand and should work smoothly at all times.

Formulation and manufacturing procedure operate in combination to give a lipstick with desirable characteristics.

The lipstick itself is a careful combination of base with suitable pigments. Considering first the base, this is made by melting together suitable waxes, greases, and oils in proportions that may vary within wide limits; despite this possible variation, a surprisingly satisfactory base, lacking a few refinements, can be made solely from beeswax and castor oil in the proportions of one to three. Ordinarily, better products are made by using a combination of waxes.

It would be no fun to attempt the formulation of a good lipstick without the use of beeswax, which has very satisfactory gelling properties, tending to hold oils in the stick and giving good molding properties to the mass. But the simple mixture with castor oil, as already indicated, is not a perfect base, being rather too hard for most tastes. Increasing the proportion of oil will, of course, lead to a stick with better application properties, but the combination will then lack rigidity and have too low a melting point. Beeswax alone does not give a stick with a high luster. The bleached or unbleached grades may be used alone or in combination with each other; yellow beeswax is credited with greater tackiness, leading to improved adhesion of the lipstick, and its slightly lower price is occasionally advantageous. Candelilla wax behaves similarly to beeswax but it gives a more lustrous stick with somewhat less drag. Carnauba wax is valuable to the extent of being irreplaceable in lipsticks; it raises the melting point sub-

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Experiments with rats seem to show that folic acid is needed for optimum growth and normal development.

FOLIC ACID

The New and Dramatic B Vitamin

By WILLIAM T. DOYLE and A. R. SAVINA

SINCE the recent announcement[1] of the synthesis of "folic acid," considerable interest has been aroused concerning the role of this dietary factor in human health and disease. Hence, a review of some of the pertinent facts that have been uncovered since the existence of the factor was first recognized would seem worthwhile.

The term "folic acid" is one of several which appear in the literature as designations for factors which are now known to be either identical or very closely related. The multiplicity in terms was more or less inevitable in view of the manner in which knowledge regarding dietary elements must of necessity be accumulated, but it is hoped that the confusion resulting from the variety of names will soon be resolved by careful studies, now that the synthetic material is available.

One of the first clues relating to the existence of a nutritional factor differing from the then known vitamins was furnished in 1938 by Stokstad and Manning[2] working in the research laboratory of the Western Condensing Company, Petaluma, California. These investigators observed that chicks required a previously undescribed dietary factor for growth which was present in large amounts in yeast and other natural foods. They tentatively named this "Factor U."

A year later, Hogan and Parrott[3] working at the University of Missouri reported a similar observation, and in addition showed that the new factor was required by chicks for the prevention of a severe form of anemia. For convenience, they named the factor "Vitamin B_c" since it belonged to the vitamin B complex group and was essential for the chick. The following year Snell and Peterson[4] of the University of Wisconsin found that an unidentified factor of the vitamin B complex was necessary for the growth of certain milk bacteria such as Lactobacillus casei, in a medium containing amino acids and the known growth factors. They called this the "norite eluate factor," signifying the fraction of yeast extract in which it was present, but the term "L. casei factor" is now more generally used.

The term "folic acid" from the Latin folium leaf

was coined by Mitchell, Snell and Williams[5] of the University of Texas to designate a growth factor present in a concentrate prepared from leafy materials or "foliage" such as spinach, but occurring also in substantial amounts in such non-leafy materials as mushrooms, yeast, liver and kidney. These investigators studied the influence of their "folic acid" on the organism Streptococcus lactis R, but they pointed out that their preparation also promoted the growth of L. casei under the same conditions as the L. casei factor of Snell and Peterson.[4] While these two factors seemed to exhibit a smilarity in several respects, some points of dissimilarity were noted, but these might have been due to the lack of purity of the various fractions compared. Nevertheless it has not yet been established that "folic acid" is identical with the L. casei factor, but there is good reason to believe that a large proportion of the "folic acid" preparation corresponds to the L. casei factor. It is interesting to note in this connection that the recent announcement[1] describes the new synthetic product as being identical with the L. casei factor isolated from liver, but no claim is made of its identity with "folic acid" although in some of the releases issued and in the press comments the two terms are used synonymously. Common usage will no doubt lead to the adoption of the term "folic acid" to designate the synthetic product.

Reference should be made to another term "Vitamin M" applied by Day and coworkers[6] of the University of Arkansas to an unidentified factor of the vitamin B complex, present in yeast and liver, which prevented nutritional cytopenia in the monkey. In 1935 they reported that monkeys given a diet deficient in this factor developed a fatal blood disease characterized by anemia and leucopenia. In many cases gingivitis and diarrhea accompanied the blood disorder. The syndrome was prevented by supplementing the deficient diet with yeast or a liver extract. "Vitamin M" has never been isolated, but there is evidence to indicate it is identical with the L. casei factor.

The L. casei factor was isolated in crystalline form in 1943 from liver by Pfiffner and associates[7] working in the research laboratories of Parke-Davis and Company, Detroit and from both liver and yeast by Stokstad[8] at Lederle Laboratories, Pearl River, N. Y. Evidence seems to indicate that this factor may exist in at least three forms depending upon the source from which it is obtained. The differences are noted chiefly in the relative ability of the various forms to stimulate the growth of different test organisms, particularly L. casei and S. lactis R. Stokstad[8] has shown that crystalline L. casei factor derived from liver has a high growth activity toward both microorganisms, whereas a similar material isolated from yeast was just as potent for L. casei but only one-half as active for S. lactis R. as the liver derivative. Hutchings, Stokstad and associates[9] reported in 1944 the isolation of a new L. casei factor having the same activity as that derived from liver toward L. casei, but only very slight activity, 6 per cent as much, for S. lactis R.

Most of the information available at present in regard to the properties of the L. casei factor is based on the natural product. The published announcement[1] of the synthesis of the compound presents comparative data on the ultraviolet and infra-red absorption spectra, microscopic examination, microbiological assay with L. casei and S. faecalis R., and growth and hemoglobin formation in the chick to demonstrate the identity of the synthetic material with the natural isolated from liver. Details of the isolation, degradation and synthesis are promised for future papers.

Apart from the fact that pure material has not been generally available, nutritional studies to determine the body's need for this factor have been complicated by the overlapping effects of other factors both known and unknown, and also by the apparent ability of microorganisms in the intestinal tract to synthesize the material. Data have been reported[10] indicating that about 70 per cent of the rat's "folic acid" requirement is produced in the animal's intestinal tract. The administration of sulfonamides, which apparently interfere with intestinal production of the factor, and the ingestion of a purified ration containing the known required vitamins but lacking L. casei factor, has been found[11, 12, 13] to retard the growth of rats, indicating that the factor is needed for optimum growth. Studies on guinea pigs, monkeys and dogs indicate that these animals also require the factor for normal development.

The effects that a deficiency of the factor produces aside from retardation of growth have been difficult to assess, largely because of the problem of inducing a "true" L. casei factor lack. In the case of chicks certain pathological changes in the blood picture have been definitely linked with an absence of this factor in the diet. Hogan and Parrott[3] have described these effects as follows:

(a) The red blood cell count, the blood hemoglobin concentration and the total red cell volume are all decreased.
(b) The hemoglobin content of the red cell is increased.
(c) The red blood cell is longer and wider than normal, the volume of the individual cell is increased, and the red blood cells of the anemic chick are less fragile than normal.

There is evidence also that feathering, hatchability and egg production may be unfavorably altered by an inadequate supply of this factor in the diet. From the studies on monkeys it seems certain that these animals too require the factor for the maintenance of a normal blood picture.

Animal experiments have offered some indication also that the L. casei factor may be an inhibitor of tumor growth. Recently Leuchtenberger and co-workers[14] observed that the factor was effective in inhibiting the growth of experimental mouse tumor transplants. In their studies they used the crystalline L. casei factor and administered it by intravenous injection. Subsequently[15] they found that xanthopterin was almost as active as L. casei factor. Spontaneous as well as transplanted tumors responded to the treatment with L.

casei factor or xanthopterin. They are many aspects of these tumor studies which require further clarification.

This now brings us to a consideration of the possible role of L. casei factor in human nutrition and therapy.

Daft and Sebrell[16] have suggested the possibility that lack of "folic acid" may be involved in some instances of blood dyscrasia which develop occasionally in patients receiving sulfonamides and also sometimes without such treatment. The mechanism may be parallel to that observed in rats receiving sulfonamides. This hypothesis has been supported by unpublished clinical studies.

Sharp and coworkers[17] have reported a preliminary study on the use of vitamin B_c now known to be identical with the L. casei factor in five patients with anemias resistant to the usual types of therapy applied during a previous period of observation of a year or more. A yeast concentrate assayed in the chick was given in doses of 600 micrograms daily and gradually increased to 1.5 mg. daily. At the end of two weeks' treatment two patients having pernicious anemia showed slight reticulocyte responses and at the end of four weeks both had a slight increase in hemoglobin and erythrocytes. Two patients with normocytic normochromic anemia of unknown origin showed a slight general trend toward improvement in red blood cells and hemoglobin, but remission did not continue. The fifth patient a former myxedema with a pernicious anemia type of blood pattern showed no significant change. A significant increase in total plasma proteins and an improvement in the albumin globulin ratio was observed. Excretion studies showed that the lowest urinary outputs were coincident with the highest plasma globulin level.

A most interesting report[18] was made recently by Spies and co-workers at Hillman Hospital, Birmingham, Alabama and the University of Cincinnati School of Medicine. The report is especially interesting because it is one of the first presenting clinical data on the use of the synthetic L. casei factor. Five patients with macrocytic anemia, a form marked by abnormally large red blood cells and low percentage hemoglobin, were given daily injections of 20 mg. of the synthetic "folic acid" for thirteen to eighteen days. These patients had been previously treated with liver extract, and had shown a hemoglobin response, following which they had been allowed to relapse. Within three or four days after the first injection of the "folic acid" the patients felt "a definite upsurge of well-being." Increases in percentage hemoglobin and in reticulocyte count were noted. In a second experiment, the synthetic material was fed by mouth in a dose of 50 mg. two or three times daily to four patients with macrocytic anemia. These patients also showed increased hemoglobin and reticulocyte count.

These observations have especial significance as an important step toward throwing light on the anemia puzzle. The past work of Minot, Murphy and Castle has shown that liver contains a factor or factors essential for blood regeneration in pernicious and other types of anemia. This factor has been referred to as the "extrinsic factor" on the theory that there is also needed an "intrinsic factor" (something in the stomach) with which the "extrinsic factor" reacts to yield the effective agent. The studies reported above point to the possibility that "folic acid" may be either the "extrinsic factor" or possibly related to it. Should this be confirmed by further studies, this work may well merit the description as "another milestone in the study of macrocytic anemias."

Several years ago when he was on the staff of the Lakeside Hospital in Cleveland, Ohio, Dr. Spies noted that sufferers from pellagra had the macrocytic or big-cell type of anemia. Others had found before him that sometimes they had the microcytic or small-cell type. Many pellagrins have no anemia at all, but when they do, it may be either the big-cell or the small-cell type. When finally Spies established the fact that nicotinic acid will cure pellagra, he also noted that it did not cure the anemia. Now hope is held out that "folic acid" may be the long sought for remedy for this type anemia.

Dr. Spies is also carrying on some interesting studies using "folic acid" in the anemia of pregnancy, nutritional macrocytic anemia and Addisonian pernicious anemia. Reports indicate that following the administration of the synthetic "folic acid" reticulocytosis takes place.

Sprue, commonly known as a "chronic disease of the hot countries," but also seen in the U. S., is usually marked by indigestion, sore mouth, diarrhea and anemia. In treating several cases of sprue, Darby and Jones[19] of Vanderbilt University, Nashville gave intramuscular injections of the newly developed synthetic "folic acid." They reported that "the patients showed immediate and marked improvement."

It is worthwhile to note that "folic acid" may not replace liver extract in the treatment of certain types of anemias. These extracts contain unknowns that are important but not fully understood. As Cowgill[20] so aptly put it: "Evidently we are about to witness many important developments in the field of anemias. It is not unlikely that some puzzles . . . will eventually be shown to be due to various complexes of interrelated dietary and physiologic factors. The discovery that a single pure substance like "folic acid" plays an important key role should make it easier now to elucidate these puzzling interrelationships . . ." With a synthetic compound of known chemical composition available there is real promise that a wealth of valuable data will be soon forthcoming to aid in the conquest of anemia.

Experiments with rats seem to show that folic acid is needed for optimum growth and normal development.

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ARTHUR L. FLETCHER

His Company Believes in Quality and Value

BOSTON, Massachusetts, is often referred to as America's Athens—a city of culture. To many, Boston is also known as the address of S. S. Pierce, longtime suppliers of extra quality groceries. The drug and cosmetic industries view S. S. Pierce as a topflight, wide-awake wholesale and retail outlet.

The man who has done so much to put S. S. Pierce in its present favorable position with the drug and cosmetic industries is Mr. Arthur L. Fletcher.

Mr. Fletcher was born in East Machias, Maine. After spending a normal childhood in the small seaboard town, Arthur Fletcher went to Washington Academy. When he had finished at the Academy he decided to go to the big city of Boston to make his fortune. He heard that a floor superintendent's job was open in one of the large department stores. Being quite young and full of ambition he applied for the position. Fletcher was somewhat abashed when he was told that only mature and experienced men were eligible for consideration. The former Maine youngster had to settle for a job as a stock boy with the R. H. White Company, another Boston department store.

The job of stock boy was not easy. Young Fletcher found the hours long and the work hard. He kept his eyes and ears open, and when opportunities for advancement came along he was frequently chosen to fill the job. After a few years Fletcher found himself White's European buyer for several of their departments. This experience gave him many new contacts. It wasn't very long before he was offered a job as the general manager of Miro-Dena, a New York perfume manufacturing firm. In this position Mr. Fletcher became known to all the principal toilet goods buyers in the country.

In 1920 S. S. Pierce asked Arthur Fletcher to come to Boston and head up their drug and perfume department. The opportunity seemed unusual so Mr. Fletcher packed his bags and made his way to America's Athens.

S. S. Pierce was established in 1831—less than ten years after Boston was founded as a city. The famous Boston grocery store was started by Samuel S. Pierce. An early Boston directory describes Sam Pierce as a "Dealer in India Goods." Later he was classified as an "Importer and Grocer."

It is interesting to recall that the word "grocer" is derived from "gross-er"; meaning one who buys goods in "gross" quantities and sells in small. Mr. Pierce's business consisted principally of large barrels and kegs of flour, chests of tea and spices, and miscellaneous household and food supplies.

The first S. S. Pierce store was located in the business center of Boston. The building in which the store was first housed was already of historical importance. The Royal Customs house had been located there, and in 1789 George Washington made his headquarters at the famous spot. Legend says that Daniel Webster was a frequent visitor to the Pierce store on his way to his law office in the same building.

From the beginning it was apparently Sam Pierce's idea to gain for his store a reputation for carrying the finest in foods and unusual hard-to-get items. One favorite story is the spectacular S. S. Pierce mission into the interior of Russia to get some isinglass which was used in the making of jellies before the days of gelatine. At times the isinglass sold as high as $18.00 a pound. When it became impossible to import isinglass, Mr. Pierce sent representatives into the heart of Russia to find some. A long and dangerous trek over the frozen wastes by dogsled finally ended up with a supply of the precious delicacy.

As a result of a policy of serving the public well, S. S. Pierce has placed itself in a very enviable and profitable

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Mary Chess was one of the pioneers at production and sales of space cosmetics. The successful growth and development of this line was due in large measure to innovations such as the line shown above.

SPACE COSMETICS

WHILE cosmetic manufacturers certainly have every possible reason to be satisfied with a sales rise that has added nearly one-half billion dollars to their sales within the short period of eight years, it is not amiss to point out that, while 1945 did bring a further increase of 13.7 per cent above 1944, per capita consumption has not progressed at the same proportional rate.

It is true that per capita statistics, running as they do over a period of years where estimates take the place of the correct census figures, are not always entirely reliable. But there is little doubt, though, that, during the last year at least, toilet goods manufacturers have done only slightly better than the "natural" growth of their market and that we are reaching a point, to all appearance, where new stimuli will be required to place cosmetic volume another step ahead of today.

This can not be accomplished by merely increasing the number of retail outlets or winning over new classes of customers, although the cosmetic industry has still a long way to go before it has fully exhausted all the potentialities of its present distribution equipment and consumer appeal. As it is, there is hardly today a type of retail outlet that has not already climbed upon the cosmetic band wagon, or a class of consumer who might be added to the regular customers of the industry from babyhood to old age.

What is needed is a new outlook, new horizons to reach, new market sources to be tapped when the present expansionary forces that have carried the demand for cosmetics upward have spent themselves.

This need is not an immediate one. It may not arise before the middle of the century. But arrive it will and the time to prepare for it is now, before necessity is overtaking the cosmetic industry and sales refuse to grow further, because there is nothing new to sell and there are no new customers to turn to.

It took fully ten years for permanent waving to gain a foothold and another five to turn it into a prosperous industry. The idea of the sulphonated shampoo mixtures was first mentioned in the late twenties. Men's cosmetics have been fighting for recognition these ten years back. The liquid nail polishes were hawked around the market by their enterprising inventors as early as the first world war.

So it is not too early for any manufacturer to look around for a useful lead, some promising idea that will secure the future of his business. The question is, where to look? Where are the new lands to be found that will make their tilling worth-while now and promise profits for the pioneer as the harvest ripens?

A study of the cosmetic industry shows that its growth has followed the consumer demand more often than developing new markets of its own. Manufacturing enterprise has gone into technical improvement rather, than market building, although there is no denying that every improvement wrought by the cosmetic chemists has aided to make cosmetics more popular with the consuming public.

However, the liquid nail polishes merely changed the

practice of manicuring but did not introduce manicuring as a practice. Nothing has been added to cosmetic usage by the wide improvement of perfume formulas. The cosmetic industry did not invent babies, teen-agers or the men customers. In fact, it was the babies, the teen-agers and the men who discovered the cosmetic industry and compelled it to supply their growing needs.

Obviously, just adding to the number of retail outlets and increasing the response of the individual consumer must ultimately lead to a condition where consumption will grow only under the pressure of heavy advertising until a point is reached where the smaller units of the industry are squeezed out of the market, and the prospect that its stronger remaining units will operate with substantially reduced profits; because of the excessive costs of gaining each others' markets and holding gains against severe competition.

If cosmetic volume is to grow, therefore, and the industry is to offer new profitable opportunities, not only to its present members but to newcomers as well, it must discover new uses for its facilities. This means new employments for cosmetics different from those to which they are put today; or at least different from those which make the majority of persons buy cosmetics now.

The principal difficulty that the cosmetic industry faces today in its search for new markets for its products is its almost complete absorption with the personality aspects of the cosmetic appeal.

Funk and Wagnall's Standard Dictionary defines the word "cosmetic" as something "pertaining to the beautifying of the complexion" and adds only grudgingly a second definition "a compound applied to the skin to improve its appearance."

As a matter of fact, the word cosmetic has undergone a great many changes since the days when it applied exclusively to lipsticks and rouges. As carried upon the cover of this magazine it is certainly covering a much wider field than that encompassed by its earlier meaning. However, it is only most recently that the term cosmetic has started to include a large number of preparations which are not strictly serving the purposes of personal adornment and that the cosmetic industry is thought of as a branch of the chemical industry rather than the step-child of the fashion markets.

It is this shift, though, in the meaning of the term cosmetic and the resulting improvement of the economic status of the cosmetic industry that carries the germ for the future expansion of the cosmetic product into new fields outside its strictly personal appeal.

Definite gains in this direction have been made already by the inclusion among the cosmetic preparations of such border-products as suntan lotions and remedies, foot aids, cooling and refreshing lotions and creams, cleansing agents and others, classified variantly as cosmetics or drug preparations, depending largely upon the label and the point of view of the manufacturer.

Before the cosmetic industry can hope, therefore, to deal satisfactorily with its expansionary problems its first move must be to explore further the possible applications of the word "cosmetics" and its relation to civilized existence, move, if necessary, further away from its dominant sense of personal adornment and include other meanings, not yet fully accepted. Once the industry and its customers have accustomed themselves to such a wider use of the word, it will immediately open new avenues of thinking that can not but benefit the cosmetic business.

The beginnings of such a general re-appraisal of the potentialities of cosmetics in their wider meaning, applying to the person as well as the world he lives in, has already been made is shown by the adoption of such highly descriptive terms as "space-cosmetics," "closet-cosmetics," "household-cosmetics" that have come into use in recent years without, however, having found wide employment yet.

It is just in these three markets, the purifying and scenting of rooms, the odorizing and eventual protection of closets, cupboards, etc. and in the service of the American home where the non-personal use of cosmetics promises to make its next advance in volume.

The fact that all these three market sources have been tapped already to a minor degree over a number of years and that, in some instances, considerable volume has resulted should not be a deterrent to manufacturers who want to explore the field still further, with a view of entering it at a larger scale as the market opens up.

In fact, any close study of the prospects of these cosmetics, wherever it has been undertaken as a preliminary measure, has only made the investigators more sure of their wide possibilities.

In making their presentations to manufacturers researchers are finding it necessary, generally, to explain that the potentialities of this new market must not be judged by the present consumer acceptance of the comparatively limited number of articles which are acting as pioneer products, but rather by the improvement, that doubtless will follow, once a whole industry is mobilized behind the new preparations. If the few space cosmetics, sold now for scenting homes, are finding it occasionally difficult to make a place for themselves, the reasons are that many of them are crudely compounded and inexpertly presented. This can in no manner imply that sales will not grow rapidly after the industry has caught up with the real wants of its customers and the modern American woman's idea of what a space-cosmetic should be.

This quite apart from the fact that, even in their present low state of perfection, space-cosmetics are rolling up surprisingly high volume considering the comparatively small efforts that are made on their behalf.

However, the application of space-cosmetics for the purpose of scenting rooms is only one of the several uses to which they can be put. Investigators are sure that many others will follow, once the chemical industry has become alive to the needs of this market.

With air conditioning of homes growing apace the cos-

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INFLUENZA

By M. A. LESSER

IF INFLUENZA should strike again this winter,—and there is always that possibility—this nation is better prepared to control this disease than ever before in medical history. Vaccines are now available which offer protection to about 75 per cent of those vaccinated and greatly reduces the severity of symptoms in those who are not fully protected. However, the fact that such materials are available does not lessen the need for caution nor decrease the inportance of other protective and therapeutic measures.

Public health workers[1] consider influenza as one of the most widespread and destructive diseases of man. Certainly, no one who has lived through the influenza epidemic of 1918 will ever class it as anything but a dangerous disease. Considered the greatest single catastrophe of modern times, it has been reliably estimated[2, 3] that the pandemic of 1918 involved 500,000,000 people and cost upwards of 15,000,000 lives. In the United States alone, the toll of the pandemic was well over 500,000 deaths.[4]

Influenza is essentially an epidemic disease which has appeared in all parts of the world at one time or another. Known under many interesting and indicative names, influenza is also an ancient disease. According to McCartie,[5] Hippocrates is supposed to have made allusions to this disease in his writings. History points to a disease that spread through the Athenian army in 415 B. C. In 827 a disease of the same nature appeared like a plague and spread over most of Europe. Similar epidemics appeared in France and Germany in 796, and other epidemics were recorded in other centuries. In the fourteenth century, the records became more regular and precise and epidemics were described in detail. World-wide occurrences of the disease are recorded for 1847, 1889 and 1890.

Of course the worst epidemic on record is that which started in 1918 and continued well into 1919. Between 1920 and 1944 there were sixteen epidemics of influenza in the United States. At least six of them were nationwide; the rest being limited to various parts of the country.[6] The winter of 1945 saw another flare-up of the disease.[7]

By charting the number of deaths from influenza each month over a number of years, evidence has accumulated which shows that this is a disease which reaches epidemic proportions at fairly regular and frequent intervals. Because of this regularity, many attempts have been made to find a cyclic pattern and to determine the periodicy of the disease.[8, 9] Should a definite pattern be determined, it may become possible to predict the period when an epidemic is about due. This would permit adequate preventive measures to be instituted and thus greatly increase the possibilities of controlling the disease.[10] While this picture may become more complicated in future years, it has become possible in most epidemics of influenza to predict to some extent the geographical spread of the disease.[11]

The disease has been known to travel over mountains and across seas where the usual means of communication through individuals could not occur. In a general way, the epidemics seem to move from east to west, but there are many exceptions to this rule.[5] However that may be, it is well recognized that influenza is a highly infective disease that can be transmitted by very slight and transient contact between the infected person and the susceptible individual. Airborne infection is probably the most common mode of transmission, but the responsible organisms may be transmitted by inanimate objects and by hand to mouth. Contaminated eating utensils and food are important factors in the disease's spread.

Influenza is probably transmissible throughout its clinical course, but infectiousness is greatest during the period of invasion and during the early stages of the disease.[12] The short period of development without recognizable symptoms permits the affected person to continue his normal routine, thereby spreading the disease to many others before he is sick enough to go to bed. Moreover, because natural immunity following infection is of short duration (one year or less), a significant proportion of the population is continuously susceptible to the disease.[1]

The incubation period of influenza is very short; ranging from 24 to 72 hours. The onset of the disease is rapid. Common symptoms include fever, muscle aches, headache, inflammation of the nasopharynx, cough, flushing of the face and prostration. Influenza leaves its victims in an exhausted condition far out of proportion to the length of illness. Pneumonia, which may be severe and sometimes fatal, is the most serious and important complication following influenza. Other serious complications include infections of the ear or sinuses, and bronchitis.

In its early stages, influenza is often indistinguishable from the common cold. Up to a few years ago laboratory procedures were considered of little or no practical

value in confirming a clinical diagnosis. With the establishment of the etiology of the disease, recognition of influenza has become possible through recently developed laboratory technics.[13, 14]

In the past, many organisms have been held responsible for influenza and a number of false trails were followed. Today it is well established that the causes of influenza are filterable viruses of different strains. These causal agents are found in the discharge from the nose and throat of infected persons. Thus, as noted by Krueger and his associates,[15] influenza is not merely scientifically distinct from other respiratory infections but is due to a specific agent, the influenza virus. This organism cannot be isolated from any of the other "catarrhal fever" group of respiratory diseases.

Actually, the isolation and identification of the viruses responsible for influenza is a comparatively recent achievement. The initial step in the identification of a virus as the principal causative agent of influenza came in 1931, when Shope[16] demonstrated the association of a filterable virus with the disease in swine. Two years later, a similar finding for the disease in man was reported by Smith, Andrews and Laidlaw,[17] who isolated a filterable virus from a human case of influenza in England. This agent was designated as influenza virus A (W. S. strain). In 1934, Francis,[18] in this country, isolated from man an immunologically identical virus which is known as the influenza virus A (PR8 strain). In 1940, a new type of influenza virus, immunologically different from influenza A and the swine influenza virus was found independently by Magill[19] and by Francis.[20] This new agent was called influenza virus B. In the last few years, many strains of these two types of humna influenza virus have been isolated and identified.[21]

Much other vital information concerning influenza A and influenza B has been assembled, all leading to a clearer understanding of the disease and paving the way for better control. Thus, types A and B influenza viruses are believed to be responsible for the epidemics that have occurred every few years since 1918. Investigations by the Commission on Acute Respiratory Diseases[9] indicates that influenza A has a cycle of two to three years and influenza B a cycle of four to six years. Other types of influenza viruses probably exist, but no evidence has been obtained that other viruses have caused epidemics of a widespread nature during the past twenty-five years.

As was pointed out in the *British Medical Journal*,[22] both virus A and virus B cause sharp attacks of fever with general symptoms outweighing those arising from the respiratory tract. Both are apt to be followed by penumonia, associated with bacterial invasion of the lung, though perhaps the risk of chest complications has in the past been greater with virus A than with virus B infection. Some workers[23] have thought that virus B has a more gradual or insidious onset and is associated with a greater intensity of coryza and other nasal symptoms than influenza A. These findings were not confirmed by experience in England in 1943, when

BLACK STAR

the cases of virus B infection were clinically indistinguishable from those of virus A in former years.[24]

With the discovery of influenza A virus in 1933 came renewed efforts to develop vaccines that would increase immunity to the disease. The first experimental vaccines were prepared from infected ferret or mouse lung tissue. An important step forward was the discovery that the virus could be grown on chick embryo tissues. A complex vaccine prepared from chick embryos inoculated with i nfluenza A virus was extensively tested on many human subjects by Horsfall and his associates.[25] The incidence of the disease was significantly reduced by subcutaneous injection of the vaccine, but the disease was not entirely prevented.

The finding that viruses of both types A and B multiplied enormously in the extra-embryonic fluid of chick embryos provided a rich source of virus with relatively little admixture of non-virus protein, which might have undesired effects. It is this type of influenza virus vaccines, prepared by concentrating the virus from chick

(Continued on page 282)

The Doctor Examines His Mail

THE pharmaceutical industry has become known as a great believer in the effectiveness of direct mail. Seldom does a year go by that at least one company is not nationally recognized for its outstanding contribution to direct mail progress. Two interesting examples of pharmaceutical direct mail, and an annual survey of a physician's mailbag would seem worthy of close examination at this time.

Two Interesting Direct Mail Approaches

Sharp and Dohme has just inaugurated an unusual series of "whodunnit" mailings. Each mailing contains a short well-illustrated story. They were written by Riley Brown of the Gray and Rogers advertising agency.

Each broadside is a four-page folder printed in letterpress in three colors. The first three pages contain the entertaining mystery story. The back page features a brief, to-the-point description of a Sharp and Dohme product. It is planned to send the mailings at monthly intervals, each to be accompanied by a letter and business reply card. The letter helps merchandise the folder and the business reply card offers the physician an opportunity to send for a sample of the Sharp and Dohme product described on the back cover. It is interesting that the "whodunnit" story is in no way related to pharmacy or medicine. It is simply designed to entertain the reader physician. Preliminary reports indicate a favorable response on the part of the physician to this new and rather unique approach.

The Upjohn Company is also using an interesting and new type of mailing to stimulate physician interest. The series has been planned to promote Unicaps through the use of attractive cutouts illustrating various rich food sources that we are accustomed to look to to satisfy our vitamin needs. The first five mailings that we have seen showed: (1) an orange; (2) a bottle of milk; (3) a bunch of carrots; (4) a butter churn; (5) a pork chop.

There is no doubt that the physician's attention is attracted to this interesting and rather unusual direct mail approach. The inside pages are very simply designed to tell the Unicaps story convincingly.

The two cases just cited illustrate the hard thought that pharmaceutical advertising managers put into developing sound, effective and interesting direct mail programs. That kind of effort assures the pharmaceutical industry of continued leadership in direct mail advertising.

The General Practitioner's Mail

Fisher-Stevens has made an interesting survey of the direct mail a single general practitioner received from May 1, 1945 through April 30, 1946. They reported 1,826 pieces of mail which was an increase of 44 per cent over the previous year. They pointed out, however, that while the increase was large it should be noted that the average number of pieces of mail received per day was only six.

It was quite evident from the survey that pharmaceutical manufacturers continue to dominate the doc-

Survey of 1826 Pieces of Mail Received by a General Practitioner Between May 1, 1945 and April 30, 1946

	Percentage of Total
Type of Advertiser	
Pharmaceuticals	85.9
Medical books and Journal subscription solicitations	2.1
Medical equipment and instruments	2.0
Miscellaneous—including all mail of a non-medical nature	10.0
Type of Postage Used	
Printed permit	50.0
Postage meter	27.2
1c stamp	8.6
2½c stamps	1.0
1½c stamp	4.0
First-class	3.0
Government post cards	5.3
Corner Cards	
Usual style—name and return address in upper left-hand corner	70.2
Name and address on flap or reverse side	17.5
P. O. box or street address used—no company indicated	4.3
No corner card or return address	8.0
Broadsides and Mailing Cards	19.9
Sealed	2.9
Unsealed	7.1
Mailing cards	9.9
Sample Request Cards Enclosed	14.6
Not prepaid	2.3
Business reply	12.3
Samples	9.3
Blotters (1 or more) enclosed	15.4
House magazines (monthly, bi-monthly, or quarterly)	7.0
Letters enclosed	22.4
Number of Products Advertised in Individual Mailings (house magazines excluded)	
One product	64.7
Two products	17.3
Three products	6.0
Four products	2.3
Five products	1.5
Over Five products	8.2

tor's mail, although the percentage of the total dropped slightly over the past two years. Miscellaneous mail showed a slight increase.

It was worthwhile to note that practically all the mail Fisher-Stevens examined was sent out under the third class rate of postage. The use of government postcards for flash announcements increased. Apparently the trend is in that direction. Obviously the big advantage of this type of mailing over third class is its faster delivery which at times is an important consideration.

In summing up the survey, Mr. H. J. O'Neill, Fisher-Stevens Vice-President says:

"It is interesting to see that, on reply cards offering samples, the mailer pays the postage in the large majority of cases. This has been a definite trend in the last few years. Manufacturers have discovered that the sample hounds are not discouraged if the card is not prepaid and that the total response is halved if the doctor has to hunt for a stamp.

"Unsolicited sampling has passed pre-war levels. More advertisers are making broadcast sampling a part of the promotion picture.

"The use of letters in medical mailings is growing steadily although it is chiefly a small unit of large

(*Continued on page 286*)

MAILINGS ACCORDING TO PRODUCT CLASSIFICATIONS

Product Classification	*Percentage of Pharmaceutical Mail Total*
Analgesics and Antipyretics	1.8
Amino Acids (oral and parenteral)	.5
Antacids	2.7
Antiasthmatic and oral hay fever preparations	2.5
Antiarthritic Products—including high potency vitamin D preparations	3.6
Antispasmodics	3.2
Baby Products—including foods, cereals, milk modifiers and oils and powders	2.8
Calcium Products—including those with dicalcium phosphate and vitamin D	1.2
Cardiotonics, vasodilators, vasoconstrictors, diuretics and hypotensives	5.7
Choleretics	3.4
Contraceptives	1.0
Cough Preparations—largely syrups	2.1
Detergents (skin)	.6
Diagnostics—including contrast media, urinalysis and anti-Rh serum	.8
Digestants	1.4
Eardrops	1.1
Endocrines—including thyroid, adrenal cortex and male and female sex hormones. The vast majority of the mailings were on female sex hormone products	12.6
Fungicides	.8
Hematics	4.3
Immunizing agents—pertussis products are the most common	.9
Laxatives—including mineral oil emulsions, both plain and the phenolphthalein type. The mineral oil emulsions nosed out the bulk laxatives in number of mailings	2.8
Nasal Preparations—including sulfonamide-vasoconstrictor types and the ephedrine or ephedrine-like compounds alone	3.7
Obesity Products	.5
Ointments—sulfonamides, coal tar, local anesthetics, cod liver oil, and ointment bases. Coal tar ointments appear to be the class promoted most frequently by mail, although the sulfonamide group was not far behind	7.2
Parasiticides	.9
Penicillin—since oral penicillin was not introduced until late in 1945, the parenteral form got most of the direct mail effort. However, the trend is definitely toward more direct mail emphasis on the oral forms	1.8
Respiratory Stimulants	.4
Sedatives and Hypnotics	3.4
Skin Antiseptics	.6
Sulfonamides—Under this heading are included sulfonamide tablets, suspensions, lozenges and gum. The sulfonamide ointments are included in the "ointment" group	1.6
Suppositories	1.4
Sympathomimetics	1.6
Tonics	.9
Urinary Antiseptics	1.4
Vitamins—Broken down according to types the vitamin mailings looked like this:	12.4
A & D Products	11.48
B-Complex Preparations	34.46
Multi-vitamins	34.90
Therapeutic Vitamins	3.83
Vitamin A Products	1.71
Vitamin C Products	3.42
Vitamin D Products	3.81
Vitamin E Products	2.56
Vitamin K Products	2.97
Pyridoxine	.86
Miscellaneous—There are certain products which have a very narrow field of usefulness. We have chosen to put these under the miscellaneous heading	6.4

"The bigger the family—the better the service"

CONTINENTAL CAN COMPANY, INC.

PAPER DIVISION

PAPER DIVISION Headquarters
230 W. 42d St., New York 18, N. Y.

MONO NESTED AND CYLINDRICAL CONTAINERS

COMBINATION PAPER-AND-METAL CANS

FIBRE DRUMS The Container Co., Van Wert, Ohio

Sales offices in all principal cities

You'd think that Continental—one of the largest producers of fibre drums in the world—would be able to deliver enough on time. We would, too, if our plans for 100% plant and expansion had gone through on schedule. But, like everyone else, we've been held up by adverse conditions. When we get rolling at full speed again, you'll be able to depend on Continental for not only the best in quality, but the best in service, too.

Packaging and Selling

Depression Proof

For the manufacturer who worries about what may happen to his sales if we should hit a post-war depression, there is some interesting reading in a study by Arthur R. Tebbut of the Harvard University Graduate School of Business Administration, dealing with the Behavior of Consumption in Business Depression, made during the course of the lamented but not forgotten years of 1929 to 1933.

If ever there was a good hard hitting depression it was this one. It had the series of depressions following the Civil War licked to splinters and made a baby out of the eighteen months, or so, of the post-war decline of 1920 to 21.

Yet, big as it was, it did not do much more than lower temporarily the interest of the consumer in cosmetics and toilet goods and, what is of prime importance, it actually raised the percentage of consumer spending for toilet goods in proportion to the total national income.

Of course, sales declined. Nothing else could be expected during a period where total consumer expenditures dipped from a high of $78 billions to a depression low of $46 billions. But the figures assembled by the Harvard study tell only part of the story, supplying an excellent background, though, to what happened during these exciting years.

Using the well-known Controllers' Report as its source it reports sales of toilet articles, etc. starting off with 101 at the nation's department stores in 1929. They rose to 102 in 1930, declined to 96 in 1931 and registered a further decline to 88 in 1932. These figures refer to department stores with a volume from $2,000,000 to $5,000,000 and are probably typical for the majority of all retail stores, dealing with the average middle class customer of the cosmetic counter. They do not differ substantially from the national average for all department stores for which the corresponding figures were 101 in 1929, 103 in 1930, 99 in 1931 and 87 in 1932. In other words, all that happened to cosmetics during the nation's worst depression was a drop of approximately 12 per cent in sales and the heavy decline of the retail price index from 118.4 to 76.3 during the period from 1929 to the end of 1932 makes it probable that a large part, if not the largest, of this drop in sales was due to lowering prices. The consumer got more cosmetics for her dollars than during the preceding period.

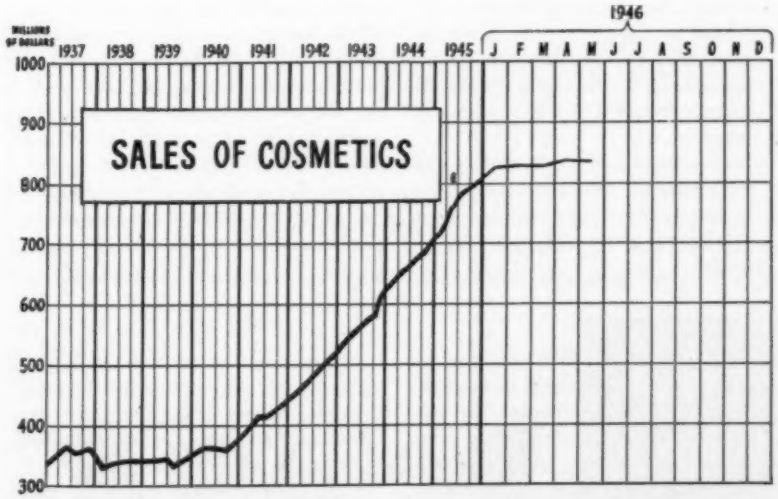
These were the years when the low priced variety store cosmetic counters reaped a rich harvest and even formerly top-priced cosmetic lines made a determined bid to the mass consuming market by introducing dram sizes for expensive perfumes and smaller packages for utility articles.

As the result these declining indexes look a great deal less imposing when put to the test of actual dollar volume, spent during the years in question by the American consumer.

Using U. S. Department of Commerce figures for the purpose of comparison, as the annual series of statistics now made available by this magazine had not yet put in appearance; cosmetic sales declined from $588,000,000 in 1929 to $445,000,000 in 1932. Volume dropped 25%, prices 36%. Not only were cosmetics bought at considerable savings, but, more cosmetics were bought in terms of physical volume at the end of the depression than at its start.

Actually the depression b r o u g h t thousands and thousands of new customers to the cosmetic industry. They came from many sources; women whose husbands were out of work and who had to go to work themselves as jobs opened for them and help the family through the depression, older women in employment whose youthful appearance became suddenly a business asset with thousands of youngsters clamoring for their positions, men with greying hair who were let go often first, with no seniority rules to protect them, and who looked to toilet goods counters for relief.

Refusing to let themselves be disturbed by the depressing influences that surrounded them the cosmetic manufacturers started to make good use of the mora'e building properties of their products. They were selling more volume than before and, thereby, laid the ground for further growth. Moreover, they were successfully showing their



Retail sales of cosmetics for the twelve months ended with May 1946 totaled $835,405,000. This compares with $836,805,000 for the twelve months ended with April 1946 and with $757,882,965 for the twelve months ended with May 1945.

customers that there is more to cosmetics than lipsticks, rouges and powders.

While the dollar value of cosmetic sales lost ground, it did not lose as heavily as did other groups of consumers' goods. Women's apparel sales in department stores dropped severely; coats and suits 44 points of the index, dresses 54 points, sports wear and sweaters 14 points. Men's clothing experienced a 38 point drop. Only two commodities stood up better than cosmetics—petticoats and slips and, interestingly enough maids' and nurses' uniforms.

When the rebound came toilet goods p'cked up strongly during the 1934-1935 season, stores showing as much as 15 per cent advance at their toilet goods counters while all-over sales remained still just above the depression level.

However, while the Harvard study is reassuring on the point that the consumption of goods by the mass of the people "has held up remarkably well considering the extreme severity of the business depression" and other statistics quoted herein certainly support this thesis as far as toilet goods and cosmetics are concerned, it contains, nevertheless, a note of caution that needs repeating now in a period of fluctuating raw material supplies and price levels. "Consumption of producers' goods suffered unprecedented declines during this depression period."

It is difficult to determine the full effect of a general break down of the stability of the supply industries, and supply sources generally, upon the prosperity of such a highly diversified industry as the manufacture of cosmetics. However, there is little doubt that some of the more severe troubles besetting the cosmetic industry in the years following 1929, those especially that prevented it from making the correct use of its opportunities, resulted from the general disorganization of its basic material sources. Raw material prices were high and often remained high where a lower level might have been helpful in permitting the cosmetic manufacturers to make a profit. As the result manufacturers faced a declining price front with steadily failing support from behind, forcing dozens of producers out of the market and weakening the financial structure of the industry.

Such a condition might easily reappear today and it is probably the only weak spot in an otherwise extremely satisfactory outlook.

If consumers' income should decline permanently, it is only natural that an increasing part of it will go into the satisfaction of indispensable necessities. The Harvard study, made "on the spot," gives proof of this. Food consumption remained comparatively steady, department store sales dropped from 101 points of the index in 1929 to 66 points in 1932. This means lower prices to maintain volume for the lesser essential items on the consumers' shopping list. It may not affect the actual physical volume of the demand for cosmetics. It will make it advisable though to keep the price structure liquid.

This consideration applies to every manufacturer of cosmetics, the high priced or the popular priced one. Top priced lines suffered as much during the

The Cosmetic Trend

Cosmetic buyers paying a flying visit to the market just after July Fourth have generally taken the opportunity of discussing their Christmas expectations with their local buying offices and manufacturers. Most express themselves satisfied with the samples which they have seen and all foresee another active Christmas season for their cosmetic counters that may even outdo that of 1945.

However, it is not so much what buyers tell them about the displayed sample lines that should interest cosmetic manufacturers these days, but rather what they expect to find when the Christmas buying season gets fully on the way.

Much depends, of course, upon the individual point of view. Talking it over, though, with the average cosmetic buyer one gets the impression that most of them think that their customers are hankering back to prewar days. What they want is a real Christmas atmosphere; meaning plenty of metallic wrapping in gold and silver with a substantial dash of holly and green thrown in for good measure. The days when anything made an acceptable gift, are definitely on the way out. Ornamental packaging will come back in its own and most buyers prepare for a good selection of gift boxes and sets.

Manufacturers of suitable complete lines may find this Christmas a good one for pushing their larger gift ensembles which had fallen somewhat in the discard in recent years. While no one can say anything reasonably reliable about prices, the average buyer feels that there will be a good demand for the more costly sets.

Two important trends are shaping the Christmas demand in the opinion of buyers who have watched their customers during the last months. Both will have to be taken care of as counter assortments are built up. The first is that more gifts will be bought for separate consumer groups, as gifts for babies, juniors, high school girls, teen-agers, younger men, men generally, etc., etc. This may mean separate displays and merchandise especially manufactured and selected for the individual purposes. The other, still not quite fully developed, will be the growing tendency of many women to buy "matched" dress accessories of which lipsticks, compacts and vanities are part.

This later development has found repeated try-outs more recently and suitable displays have been moved to counter locations where they adjoin the regular hand bag, leather ware etc. displays of the fashion accessory sections. Possibly even more important for the cosmetic industry is the general flare-up in the accessory field and the opening of large numbers of stores, specializing in accessories or handling accessories in connection with other articles of women's wear, as shoes for an example. Lipsticks, compacts and vanities (occasionally a high class perfume) often are sold by these stores. Their demand for cosmetic Christmas gifts should make a good addit on to the gift business of the industry.

It all looks like a prosperous Christmas season clouded, though, as the outlook is as to what prices may do. Almost every buyer has orders waiting for his signature. While buyers generally have confidence in the willingness of their supply sources to hold the line, they are not so entirely sure whether cosmetic manufacturers will find the same considerate treatment from theirs. Price spirals rarely start at the retail end. They take their beginning at the raw material source.

"Hidden weaknesses come to light here!"

Peering at an Armstrong's bottle through a polariscope in the control room at Armstrong's Millville, New Jersey, glass plant is Earl Martin, veteran of 24 years of glassmaking. Listen while he tells a group of Armstrong's salesmen how the use of this modern testing device helps safeguard the quality of the glass you get from us.

"With the polariscope, we can quickly spot in the bottles any hidden weaknesses resulting from improper cooling—or annealing, as glassmakers call the cooling process. A well-annealed bottle seen through the polariscope reveals an even, well-spaced, dull-colored line pattern. If the annealing is faulty, the line pattern of the bottle will be brilliantly colored, wavy, and irregular."

Besides the polariscope, Armstrong's salesmen are introduced to many other modern testing devices. As part of their extensive and periodic training program, they see the section ring test for glass distribution, the thermal shock, chemical durability, and the many other exacting tests which make sure you get only top quality Armstrong's glass.

This factory experience, besides supplying our salesmen with practical facts and figures about the production of glass and closures, helps them to do a better, more intelligent job of servicing your needs. Get full information on any of Armstrong's glass or closures from your Armstrong representative, or write direct to Armstrong Cork Co., Glass and Closure Division, 3808 Prince St., Lancaster, Pa.

Take a good look!

MAYBE ONE OF THESE TWO FAMOUS GARDNER-RICHARDSON FOLDING CARTONS IS "IT" FOR YOUR PRODUCT

Moisture-resisting Hydrotite Cartons. Made of a time-tested paperboard with three-layer construction. Asphaltic center layer retards to a high degree both the entrance and the escape of moisture. Helps guard against weight losses and moisture absorption.

If you have a product which requires effective (very high, but not 100%) moisture-vapor protection, *Hydrotite* may be the answer to your needs. Why not find out? Ask us—without obligation—to make up some sample *Hydrotite* cartons to test in your laboratory and in your machines.

***Coated* Lithwite Cartons.** Made of the whiter, revolutionary *clay*-coated paperboard which was pioneered seven years ago by Gardner-Richardson. Today, *Coated* Lithwite is used to package many of America's most famous products. Produced by the most modern method, its smooth, hard, chalk-free surface has a more brilliant, more uniform whiteness, insures sharper, brighter printing . . . makes more *eyes* reach for your product on shelves and in mass displays.

As you might expect, demand for this quality board has exceeded supply. But provision is now being made to increase *Coated* Lithwite production, making it available in larger sheets for a greater range of carton sizes. It may be that this new size range will be particularly advantageous to your carton needs. Your request for additional information will be welcomed.

The GARDNER-RICHARDSON Co.

Manufacturers of Folding Cartons and Boxboard • Middletown, Ohio

Sales Representatives in Principal Cities: PHILADELPHIA • CLEVELAND • CHICAGO • ST. LOUIS • NEW YORK • BOSTON • PITTSBURGH • DETROIT

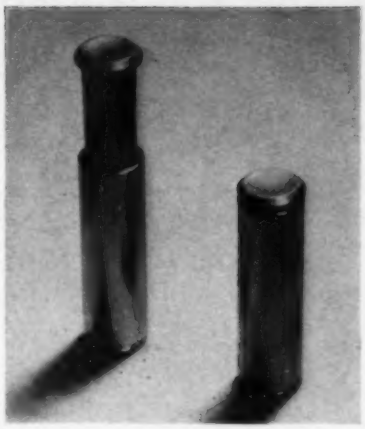
post 1929 depression as did the low priced ones. It makes it essential though for the manufacturers of material supplies to study their position at an early date.

For better or worse the cosmetic supply industries are part of the larger chemical industry and its raw material problems, supply and price levels, reflect upon its own ability to maintain healthy supply conditions and equitable prices for its customers the manufacturers of cosmetics. Sharp declines in production and generally disturbed conditions in the coal industries, petroleum refining and other basic industrial groups preceded the retail declines of 1931 and after. It would be a sad reflection upon such a flourishing and practically depression proof industry, as is the manufacture of cosmetics, if it should find itself caught in a cost squeeze from the inside that prevents it from profitable operation at a time when customers clamor for ever increasing supplies.

Kare

Grove Laboratories has entered the deodorant market with Kare which, according to its press releases, "dries quickly on the skin, and since it is harmless to delicate fabrics, clothing can be worn almost immediately after application without fear of staining. Unlike cream deodorants which have a tendency to dry out and become harsh and gritty, Kare retains its stable, bland consistency. It is not only an effective anti-perspirant deodorant, but a soothing, cooling lotion which softens and refreshes the skin. Because it is non-irritating, Kare can be applied immediately after underarm shaving. The lotion is not oily or greasy, which is one of the main disadvantages of deodorant creams. It is harmless to nails and cuticles and does not collect under the fingernails. Kare is unusually welcome to men. It can be applied as simply as an after shave lotion, and it will not mat."

Vintner Red, new Dorothy Gray color for Fall is a rich flattering color packaged in a box embossed with a wine steward's key and chain which symbolizes the theme.



The Atomizer & Novelty Corp. has brought out a pocket and purse atomizer, said to be leakproof and spillproof. It is no larger than a lipstick and operates when slight pressure is applied to the top.

Religion and Perfume

The reaction has set in. The continuing sex angle on perfumes and perfume names has moved Chas. V. Sparhawk of Sparkhill, N. Y., to start some pressure in the opposite direction. And, as he points out in the challenge which follows, perfume had its origins in religion and religious ceremonies, so that this really marks a return home. Now Mr. Sparhawk takes over. The capitals are his. Some people disapproved on general principles of Custom and their refusal to consider Perfume seriously as anything but a Cheap Allure, intended basicly as an ANIMAL FASCINATION! They looked upon it as a Pathological matter of a Mental-Hypnosis-Media some women used successfully in relation to the masculine sex.

The Truth is Perfume has been "tagged" with a cheap, marked-down cash value of Counterfeit quality. It's been classed with Burlesque, Strip Tease and Questionable Entertainment. It's Price is high, it is True—so is Vice—it's not cheap. But why bring it into our Homes, deck our Daughters and Wives and Mothers with its Stigma. Is there no difference between "Sacred and Profane Love"! Is there no line drawn?

Why Not a Perfume with a Religious Theme? Why not raise it like the beautiful Water Lily that has its roots in the mud and muck of stagnant pools into God's sunshine of Sweet Fragrance and Delight! The Easter Lily has a Religious significance that expresses Purity, Self Denial and Reincarnation. That flower has always been associated with the Church, Marriage, Easter and The Better Life. Why not Perfume?

We dare anyone to challenge those truths.

This is a new Departure—using a Religious Theme! Before we did it, we sent about fifty letters to different Editors and Prominent Churchmen, (Including Cardinal Spellman, Bishop Manning, Harry Emerson Fosdick and others). We had replies from almost all of them. Some were slightly skeptical, others favorable; while there were extremes who were 100% against or 100% in favor. We felt the matter was controversial—but still had reason. Names of Perfumes such as Scandal, My Sin, Shocking and even one Mujer Mala (meaning in Spanish a Dissolute Woman) seemed to challenge. Should Men's perfumes be named Satan, Roue, Lucipher, Wolf and Paramour to be popular?

There is a perfume called Ave Maria and Heaven Sent! The Scriptures mention the Wise Men brought Perfume in the way of Incense and Aromatic Fragrance to the Christ Child. Mary washed the feet of Jesus with Sweet Ointment and there are many references in the Bible to the religious significance of Incense, Savors and Sweet Smelling Offerings. Michael Angelo, Raphael and many Immortal Artists received their

Dryad is a new deodorant cream offered by Jergens. With a texture like face cream, Dryad is soft, smooth and daintily perfumed.

EXPERIENCE COUNTS*

BERNARDIN
Metal Closures

"We learn best, who have experienced most" is as true in making closures as fine violins. Bernardin engineers and craftsmen have literally *lived* the history of metal closure progress! Thus they have acquired the technical skill and mature judgement that are so important a part of Bernardin service today. Bernardin Bottle Cap Company, Evansville 10, Indiana.

** Experience counts in closures too!*

Since 1881—America's First Manufacturer of metal closures

Miss Twinkle cosmetics have been designed for children between the ages of two and twelve, and are packaged in a youthful, gay, charming style.

inspiration from the Church. Composers such as Bach, Handel and many others wrote Religious music.

Why should Perfume be dragged down into the Mire and Dirt of low Insinuations, with Vile References to Immortality and Shame? Has the Devil all the rights to sweet fragrances by calling an Odor "Saint or Sinner"! One bottle for Saturday night debauchery and disgraceful actions, the other for Sunday Confession and Repentance? That seems straight Mockery!

Many of the Women Editors of Magazines designed and published for young women commented on this and favored a higher plane for the Art of Perfumery. They felt especially "TEEN-AGERS" deserved a better goal.

Esme of Paris has introduced Indian Summer perfume which is not only colored with the tone of autumn leaves but the packaging is in beige and brown tones to carry out an autumnal note.

Meet Miss Twinkle

An interesting newcomer to the field of children's cosmetics is Miss Twinkle. The packages are youthful, gay, and so charming that they will enhance any little girl's bedroom or bathroom scheme. The color theme is white, wedgewood blue with an accent of fuchsia pink ribbon. The delicate rose odor of Miss Twinkle toilet water permeates the entire line. This old fashioned garden fragrance has the clean, sweet, freshness of childhood. Miss Twinkle cosmetics, designed for children between the ages of two and twelve will be nationally advertised starting in October.

Hormone Creams

The Louisiana State Board of Health has just rescinded its action banning the sale of estrogenic creams in that State and the sale of such creams, properly labeled, is again permitted with the Board's full approval, according to S. L. Mayham, executive vice-president of The Toilet Goods Association, Inc.

On January 11, 1946, the Louisiana State Board of Health halted the sales of estrogenic creams. On April 2nd reputable physicians and chemists, representing estrogenic cream manufacturers, were given a hearing before the Board's members in New Orleans. On the facts presented by these physicians and chemists at that time, the Board has revised its previous ruling and it is the announcement of th's revision that has just been made, effective July 12, 1946.

Thus once more, Mr. Mayham points out, has a body of qualified authorities charged with safeguarding public health, after full and complete investigation, lifted restrictions on estrogenic cream sales.

The Board of Health of the City of New York as well as the State of Virginia, both once banned estrogenic cream sales only to lift the ban in each instance when complete information relating to such creams was reviewed by the proper officials.

The new Louisiana regulation reads as follows: "No cosmetic or beauty preparation containing as one of its ingredients estrogenic hormone, or any of its chemical derivatives, or any synthetic chemical product possessing properties similar to those of estrogenic hormone, may be manufactured, processed, packed, sold or distributed in Louisiana unless its label bears adequate directions for use and a statement of the quantity in units of such ingredient contained in each ounce of such product."

A pink, ruby-spangled box introduces Prince Matchabelli's new fall lipstick color called Prince's Ruby, a deep ruby-red created for Fall fashion colors.

Cosmetic Lure

The Gloria Vanderbilt line of cosmetics and perfumes is being launched with a great deal of fanfare. The cosmetics are limited to the essentials of skin care and make-up, and simplicity marks the packaging of Mrs. Vanderbilt's creations. Executed by Maurice Chalom, French designer, they are in royal blue, embellished with crest and her name. Daughter of a diplomat and a world traveler herself, Mrs. Vanderbilt has apparently been lured by the field of cosmetics and it will be interesting to see how a famous name on bottles and jars is received by Mrs. John Public. There are many pros and cons on the subject but only time will tell! The legend that goes with the perfume is especially intriguing. It goes like

Nettie Rosenstein enters the perfume field with a fragrance called Odalisque, dramatically packaged in gold and white, with eau de parfum, a lighter fragrance as a companion product.

IT'S Experience THAT COUNTS!

We are not as old as the proverbial hills but . . . we feel that almost half a century in the metal container field has given us the right to "crow" a little.

Down through the years *NATIONAL CAN* has been serving can users in every field, and we are proud of the fact that they depend upon our experience and facilities to supply their needs.

To our broad background of experience we add an unfailingly helpful and dependable service all along the line.

For assistance in your packaging problems, contact our local representative or write to our main office.

NATIONAL CAN CORPORATION

Executive Offices: 110 EAST 42ND ST., NEW YORK 17, N. Y.

Sales Offices and Plants: BALTIMORE, MD. • BOSTON, MASS. • CHICAGO, ILL.
FORT WAYNE, IND. • HAMILTON, OHIO • INDIANAPOLIS, IND. • MASPETH, N. Y.

The Gloria Vanderbilt line of cosmetics and perfumes makes its bow in packages executed by Maurice Chalom, French designer, in royal blue with crest and name.

Bolany has announced two new additions to its line of lanolin cosmetics, a lanolin-base lipstick in six colors, and a lanolin-base face powder in six shades.

Long known on the continent, Eau de Cologne du Chevalier D'Orsay for gentlemen is now available in this country in flasks and attractive decanters.

this: The formula for the perfume, along with a priceless blue diamond, was stolen from Louis XV. To recapture his treasure, Louis engaged the Chevalier d'Eon, whose cunning and prowess with the sword made her famous. Maurice Chalmo discovered a bust of this intriguing woman in his chateau in France, and inside the bust were found the missing perfume formulae. This, Mrs. Vanderbilt and Mr. Chalom interpreted then in a modern version—Diamant Bleu." Well, it's a swell legend but it sounds like pretty old stuff in this atomic age.

Perk-Up Set

Jacqueline Cochran is using what looks like a magnified lipstick case, one inch in diameter by three and one-half inches long, for cleansing cream, night cream blend, special foundation cream, cream rouge and face powder. It comes thoughtfully packaged with a tiny spatula with which the tiny jars may be refilled from large sizes. The gadget consists of five tiny sections that fit together to form one tube. It's literally a whole beauty shelf that can be carried in the purse or pocket and makes an ideal companion on an overnight trip or a day at the beach. While the container is not new, having made its debut five or more years ago, it apparently disappeared from the market for the duration of the war. It is good to see this compact, convenient and very useful article back on the market again.

Victoria Line Launched

Alfred D. McKelvy's long awaited women's line comes forth with two scents, Et cetera and Vice Versa in perfume, toilet water, cologne, bath oil and sachet.

The firm name under which these products are being marketed is Victoria, Ltd. The packaging is dramatic with a bottle which looks like two cubes of ice and features a clear plastic cap which sets snugly over the neck. Et cetera is a light fragrance and Vice Versa is a more sophisticated scent. Et cetera comes in a black box with gold lettering and Vice Versa is in reverse. Prices for the line are perfume, one-half, one, two and four ounces, $10, $17.50, $32.50 and $60.; bath oil, one, two and four ounces, $4.50, $8 and $15.; cologne, one, two and four ounces, $1.50, $2.75 and $5.; sachet, one, two and four ounces, $1.50, $2.75 and $5. Toilet Water comes only in the four ounce size at $8. Five sets are priced from $6 to $20.

Ayer Tint, Harriet Hubbard Ayer's semi-liquid finish, lends a flattering finish to make-up, and comes in a handsomely designed bottle and stopper.

Jacqueline Cochran has a new Perk-Up set which looks like an oversized lipstick but really consists of five tiny jars that fit together to form one tube.

Victoria, Ltd. introduces its women's line consisting of two scents, Et cetera and Vice Versa in perfume, toilet water, cologne, bath oil and sachet.

Famous Plastics

for famous merchandise

DUBARRY beauty preparations by Richard Hudnut are more of the many famous products that are graced by handsome, practical containers of rich Plaskon Molded Color. You, too, can increase the attractiveness and functional value of your containers with Plaskon because it offers drug trade products these important advantages:

Plaskon is impervious to the effects of alcohol, acetone or other organic solvents.

Plaskon can be molded into distinctive designs and shapes.

Plaskon is not affected by oils or fats.

Plaskon is available in a wide range of permanent colors.

Plaskon is odorless, tasteless, inert.

Your molder, or experienced Plaskon men, will be glad to show you how Plaskon can be used to give your products extra sales appeal.

PLASKON DIVISION • LIBBEY-OWENS-FORD GLASS COMPANY
2110 Sylvan Avenue • Toledo 6, Ohio
Canadian Agent: Canadian Industries, Ltd., Montreal, Que.

PLASKON
TRADE MARK REGISTERED
MOLDED COLOR

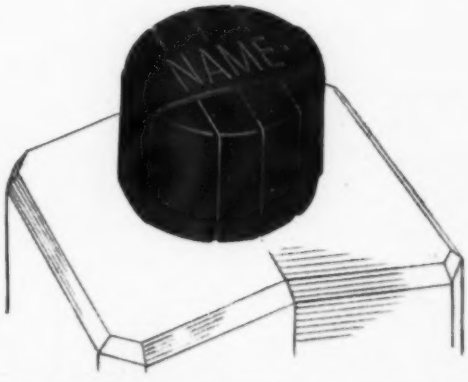
TEXAS STATE COLLEGE FOR WOMEN
LIBRARY

Ideas for dramatizing your private mold caps

GIVE YOUR PACKAGE an exciting new look that will stop shoppers . . . swing the sales to your product . . . with the distinctive beauty of an Armstrong's Artmold Cap. For helpful design suggestions, send sample or drawing of your package to Armstrong Cork Company, Glass and Closure Division, 3808 Prince Street, Lancaster, Pennsylvania.

ACCENT THE QUALITY and beauty of your "luxury" items with an individualized cameo Artmold Cap, decoratively embossed with nature or wild life designs of your own choice.

APPEALING "ABSTRACT" PATTERN gives this modern Artmold Cap design eye-catching style, makes it easy to grip and turn. Simple, clean-cut, it builds customer recognition.



YOUR BRAND NAME or trade-mark can be depressed and filled in with color. Raised design gives your package extra height, makes it stand out from competitive products.

DECORATIVE flower-bud design spotlights your brand name. One of many custom-tailored Artmold Cap design possibilities that will add sales-building style and distinction to your package.

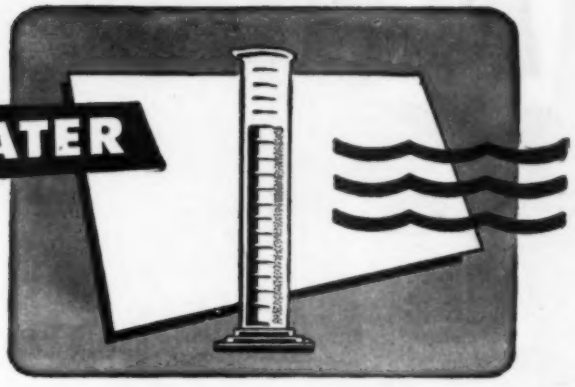
ARMSTRONG'S *Artmold* CAPS
PLASTIC

WONDER DRUG..
in skilled hands

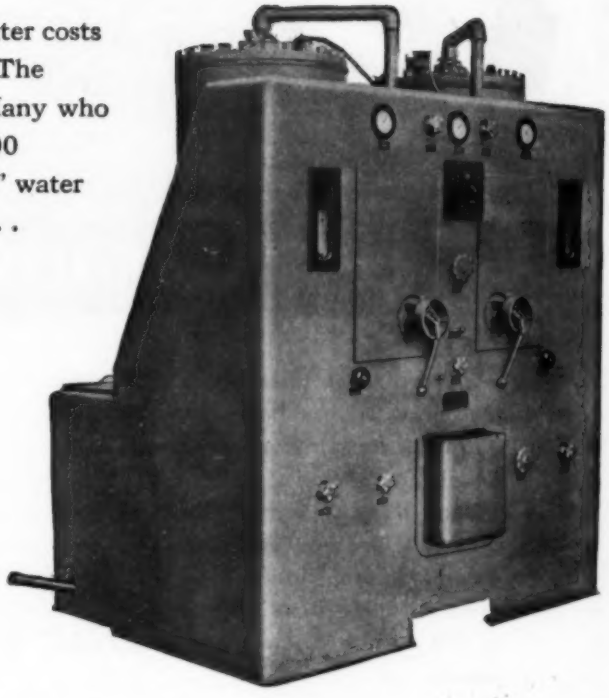
Medical research sets the pace in the development of new drugs and practices to combat disease and suffering. But it is the responsibility of the manufacturers of medical products to keep abreast of each advancement . . . to make these miracle drugs available to skilled physicians everywhere. ◆ Under the trade mark GLYCILLIN, the Meta Cine Co. of Chattanooga, Tenn. distributes Tablets Buffered Penicillin to the medical profession. From the compounding of the tablets to packaging and storage, every step must meet exacting standards. ◆ It is with pride and satisfaction that we call attention to the use of Crown Screw Caps on the GLYCILLIN Package. The Deep Hook Thread, which grips under the glass thread of the container, is an exclusive feature of Crown Screw Caps. It seals tighter with any given amount of application force. Crown Cork & Seal Company, Baltimore 3, Maryland. *World's Largest Makers of Metal Closures.*

CROWN CLOSURES

How to get $3.00 worth of PROCESS WATER for 20¢



Case histories prove it over and over again! Water costs go down when a Dorrco D-I System goes in. The $3 to 20c drop quoted here is not extreme. Many who formerly spent up to *eight dollars* per 1,000 gallons for distilled water are now getting "D-I" water at the thousand-gallon rate of twenty cents . . . sometimes two cents.



You can make these savings

The Dorrco De-Ionization System, using high-speed, high-capacity ion-exchange resins, will produce mineral-free water — the equivalent of distilled water in purity — in *any* amount you need — from a few gallons to several million gallons per day.

DORR will tell you how

Contact us for detailed information on the Dorrco De-Ionization System as it applies to your conditions. Learn how D-I removes simple hardness—decreases bicarbonate alkalinity — reduces total solids.

Phone, write or wire your nearest Dorr Office.

DORR

RESEARCH ENGINEERING EQUIPMENT

ADDRESS ALL INQUIRIES TO OUR NEAREST OFFICE

1701

DORRCO

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LOS ANGELES 14, CAL. . . . 811 WEST 7TH ST.

RESEARCH AND TESTING LABORATORIES
WESTPORT, CONN.

SUGAR PROCESSING
PETREE & DORR DIVISION
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And hundreds of other creams, ointments, and jellies, right down to "Z" for Zinc Ointment, are being safely packed in Alcoa Aluminum Tubes.

These tubes are strong, easy to squeeze, and will take a *lot* of squeezing. They keep your products in tiptop shape, and can be beautifully decorated in clean-cut designs to give your package eye-appeal and sales punch.

Give us time to run tests at the Alcoa Packaging Laboratories on samples of *your* creams and semi-liquids packed in *our* tubes. It may be that you can use plain Alcoa Aluminum Tubes—or we may suggest that you use *inside-coated* Alcoa Tubes just to make double sure. After our tests, you'll have the answer on the *right* Alcoa Aluminum Tube for your product.

The long list of pharmaceuticals, foods, cosmetics, and industrial products now being packed safely in Alcoa Tubes is yours for the asking. Write to ALUMINUM COMPANY OF AMERICA, 1913 Gulf Building, Pittsburgh 19, Pennsylvania.

SALES OFFICES IN LEADING CITIES

ALCOA
ALUMINUM

ALCOA ALUMINUM TUBES

Where's the

PONY LABELRITE*

in THIS picture?

Brother, it's the labeling machine behind the scene, in the production line of the plants where fine products are given the *extra* appeal of Fine Labeling. Lotions, salves, creams, drugs and foods of all kinds labeled on the Pony Labelrite have every label in the *correct position,* are *firmly* glued down, and never have excess glue seeping out from label-edges,—they need *no wiping.* These are "built-in" features of the Pony Labelrite.

FINE LABELING IDENTIFIES FINER PRODUCTS

Send for descriptive folder on the Pony Labelrite's exclusive features.

VACUUM LABEL FEED
lifts labels from hopper, holds labels rigidly in position while they pass over glue roller, and registers them perfectly on containers . . .

MEANS PERFECT REGISTER

TWIN-ROLLER GLUE CONTROL
The micro glue control applies a tissue-thin film of adhesive, so that no glue seeps out; no wiping is required . . .

ELIMINATES "WIPING OFF" EXCESS ADHESIVE

* Registered U. S. Pat. Off.

NEW JERSEY MACHINE
corporation

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Chicago Office — 325 West Huron St.

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KIMBLE GLASS VIALS

in a full range of sizes, adaptable to a wide variety of closures.

For Assurance

• • • *The Visible Guarantee of Invisible Quality* • • •

The Anchor NKCT Cap

GIVES QUICK, EASY ACCESS TO YOUR PRODUCTS

THE absence of interference, wedging or jamming of the thread, plus greater flexibility makes the Anchor NKCT Cap an easy cap to remove and reseal.

In application, its unique thread construction is so designed that the cap thread contacts only the underside of the glass thread and exerts an even, downward sealing pressure around the complete circumference of the container finish. This provides a positive, air-tight, leak-proof seal.

The broadly rounded thread permits a "spin on" action which makes for fast, low-cost application.

The Anchor NKCT Cap, with its sleek, domed panel and knurl-free skirt, is easy to look at, too, and its smooth, trim lines add to the sales appeal of the glass package.

Tune in "Casey, Crime Photographer" every Thursday evening, entire Coast-to-Coast Network, CBS.

Anchor
CONTAINERS and CAPS

PRODUCTS OF
ANCHOR HOCKING GLASS CORPORATION
LANCASTER, OHIO

ANCHOR NKCT CAP

Quality---

what does that mean?

When we talk about the "quality" of SWINDELL bottles, the word means different things to different people. To some, it means beauty of design that lends glamor and lustre to your product.

To some, it means sturdiness and durability that insures you against undue shipping losses.

To some, it means dependability in delivery of uniformly good looking products.

But here's the point — whatever "quality in bottles" means to you, SWINDELL's hundred year tradition of skill makes certain that you get it here—in stock or private mould bottles, machine or hand made.

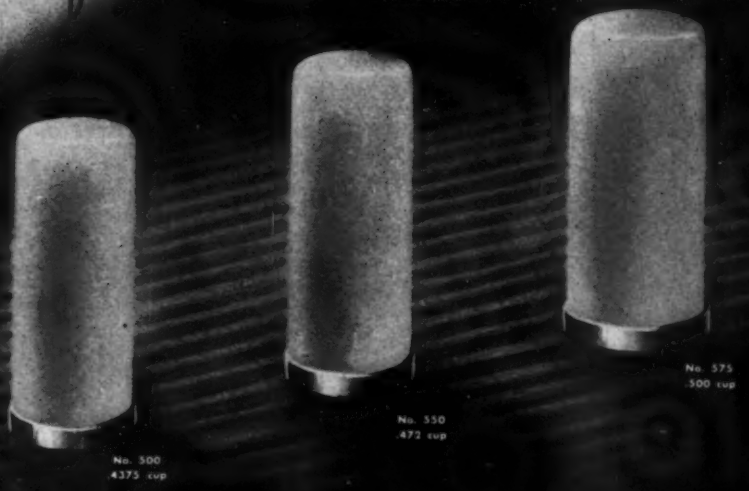
SWINDELL BROTHERS, Inc.

200 FIFTH AVE., NEW YORK ★ BALTIMORE 30, MARYLAND ★ ROBERTO ORTIZ • HAVANA, CUBA

Swindell

Bright, polished, gleaming BRASS

SWIVEL LIPSTICK CONTAINERS



"Fashioned Like Jewels"

SPECIAL FREE-WHEELING CONSTRUCTION

With Plastic Caps For Lighter Weight and Flexibility of Design, Or With Brass Caps to Your Specifications

DeLuxe bright polished brass lacquer finish

PHONE, WIRE OR WRITE FOR SAMPLES

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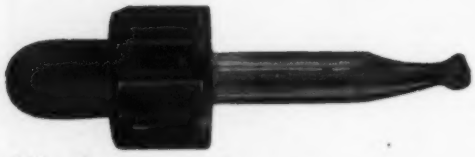
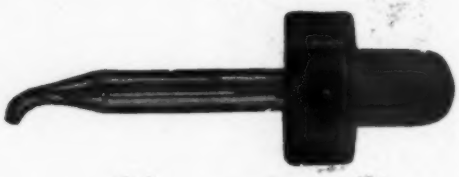
THE LEADERSHIP OF *New Perfection* DROPPING PARTS

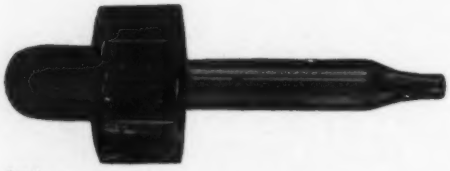
Has Been Earned Through Accomplishment and Performance



(1) Non-rolling, extra depth, Bakelite Cap with thick flange rubber part: Saftee ball glass.

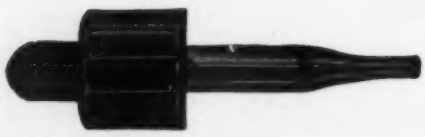


(2) Double shell metal cap; special thin flange rubber part; special bent glass.



(3) Regular or acid resisting plastic cap; regular rubber part in various colors; semi-blunt glass.

(4) Single shell metal cap; thin flange, non-swelling Amekino synthetic rubber part, without strong odor; blunt glass.



(5) Fancy colored beetle cap; midget rubber part; regular straight glass.

Dependability and flexibility of design have played a great part in bringing New Perfection Dropping Parts to their position of leadership among packaging items. Packagers of preparations with which dropping parts are used cannot afford to experiment with parts that create complaints and arouse customer dissatisfaction. New Perfection Dropping Parts are manufactured so that the ultimate user will have a dropping part that is as perfect as there is to be had. Our facilities are at your disposal.

Write us mentioning quantities and styles and we will gladly submit prices and samples. We not only can supply dropping parts for your bottles but also can furnish the complete outfits with 2cc, ⅛, ¼, ½, 1 and 2 ounce Amber, Blue, Clear or Green bottles.

PENNSYLVANIA GLASS PRODUCTS CO.

"GLASS GOODS OF THE BETTER KIND"

428-432 NORTH CRAIG STREET . . . PITTSBURGH, PA., U. S. A.

use *Vision* to get *Decision* with Anchorglass Containers

ACCORDING to scientific experts, eyes record 87% of all impressions we receive. That's why you can use vision so effectively to get the decision—to buy! The sparkling, clean outward appearance of Anchorglass containers appeals to the tidy housewife. Anchorglass invites her to inspect, recognize and purchase your product. And it gives your product the appearance of genuine quality.

But Anchorglass containers have more than shelf appeal. They're practical, as well as pretty, because they provide efficient protection until the contents are fully used. They show at a glance just how much of it is left. They prevent evaporation or absorption of moisture and retain all the strength, curative or other qualities peculiar to your products. Chemically inert, Anchorglass containers impart no foreign tastes or flavors.

Anchorglass containers *sell* for you.

Tune in "Casey, Crime Photographer" every Thursday evening, entire Coast-to-Coast Network, CBS.

Anchor
CONTAINERS and CAPS

PRODUCTS OF
ANCHOR HOCKING GLASS CORPORATION
LANCASTER, OHIO

"WINNERS

are notably endowed with

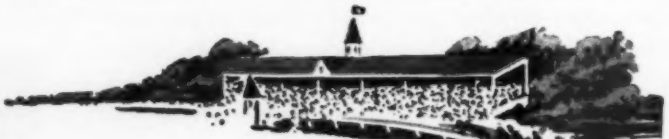
SPEED—PRECISION, AND—PERSONALITY"—

says ROBERT GAIR

Modern types of packaging machinery are endowed with speed, and personality too . . . and each machine demands a "uniform precision" carton . . . just the kind of distinctive "tailor made" cartons that Robert Gair has been creating and producing consistently for over eighty years . . . cartons that are ***GAIRanteed***.

From a "selling impulse" viewpoint many of our cartons have joined the parade of constant WINNERS.

Write for informative brochure on Precision Packaging



ROBERT GAIR COMPANY, INC., NEW YORK—TORONTO • PAPERBOARD—FOLDING CARTONS—SHIPPING CONTAINERS

GOBELIN . . . . . fit for a King

Louis the XIV had an eye for beauty. The splendor of his court was unexcelled in all of Europe. Always on the alert for products of unusual excellence, it was only natural that he would be attracted by the exquisite quality and beauty of the Gobelin tapestry. In fact, he was so impressed with this fine material that he purchased the factory in which it was made . . . put Le Brun, his royal painter, to work creating designs . . . and diverted the production to tapestries primarily for royal use.

Gobelin tapestry is characterized by the excellence of the material, the wide range and quality of the dyes and superb craftsmanship. It takes its name from a French family which established a dye works in Paris during the 15th century. Later, descendants of this same family established the tapestry manufactory that was purchased by Louis XIV. This factory still turns out tapestry of unusual excellence and is still under the jurisdiction of the State.

To the discerning buyer of commercial glass containers, Carr-Lowrey products have comparable significance. Strict adherence to the highest standards in glass manufacture for over half a century has earned the confidence and respect of quality minded buyers.

CARR-LOWREY GLASS CO.

Factory and Main Office: BALTIMORE 3, MD. • *New York Office:* 500 Fifth Ave. (18) • *Chicago Office:* 1502 Merchandise Mart (54)

THE MAGIC TOUCH
IS THE FINISHING TOUCH

SILK SCREEN DECORATING

on glass, wood, metal or plastic.
Fontaine's extensive research in decorating processes now bring you plastic paint colors that adhere permanently, to both flat and round surfaces.
All paints are baked on.
Extremely resistant to oil and alcohol.
We design a motif or execute your own.

SPRAYING

Our own lacquer formulas developed for spraying glass, wood, metal and plastics in all colors. Achieves a durable high gloss.
Oil and alcohol resistant.

CAPS, CLOSURES, ROUGE BOXES, LIPSTICK CONTAINERS

and other cosmetic specialties.
Injection, compression molded or fabricated to your specifications.
Ask for the new Fontaine
ALL-METAL LIPSTICK CONTAINER
or COMBINATION PLASTIC
AND METAL LIPSTICK CONTAINER.

FONTAINE PRODUCTS CO.
art in plastics
306 EAST 61st ST. • NEW YORK 21, N. Y.

sales sluggish?

give them

VITAMIN "SEE"

WITH

VUEPAK

It's been proved over and over again: . . . sales of drugs and cosmetics take on new life when they're put into transparent, rigid "showcases" of Vuepak.

All the color, the freshness, the texture, the design of your product is *fully revealed* . . . and *fully protected*. Since psychologists say that 85% of our impressions come to us through the eye, it's only natural that more sales result.

Important, too, for volume sales is the better retailer co-operation you get with Vuepak'd merchandise. Retailers say it's: (1) faster-moving . . . selling time and expense is reduced, (2) fully protected from shop wear . . . quality price is firm as long as it remains in stock, (3) prestige building, (4) better for display . . . stacks easily, lighter in weight.

You can get full Vuepak facts from your box-supplier now . . . or direct from: MONSANTO CHEMICAL COMPANY, Plastics Division, Springfield 2, Massachusetts.

MONSANTO PLASTICS

VUEPAK TRANSPARENT PACKAGING MATERIAL

VUEPAK QUESTIONS AND ANSWERS

1. What is Vuepak?

Vuepak is a transparent, tough, rigid, beautiful Monsanto cellulose acetate.

2. In what form is Vuepak available?

In sheets up to 30" wide, and in continuous rolls 30" wide up to 1000 ft. long, depending upon thickness.

3. In what thicknesses is it ordinarily available?

In six standard gauges 0.005" to 0.020".

4. Does sunlight affect it?

No.

5. Is it affected by heat?

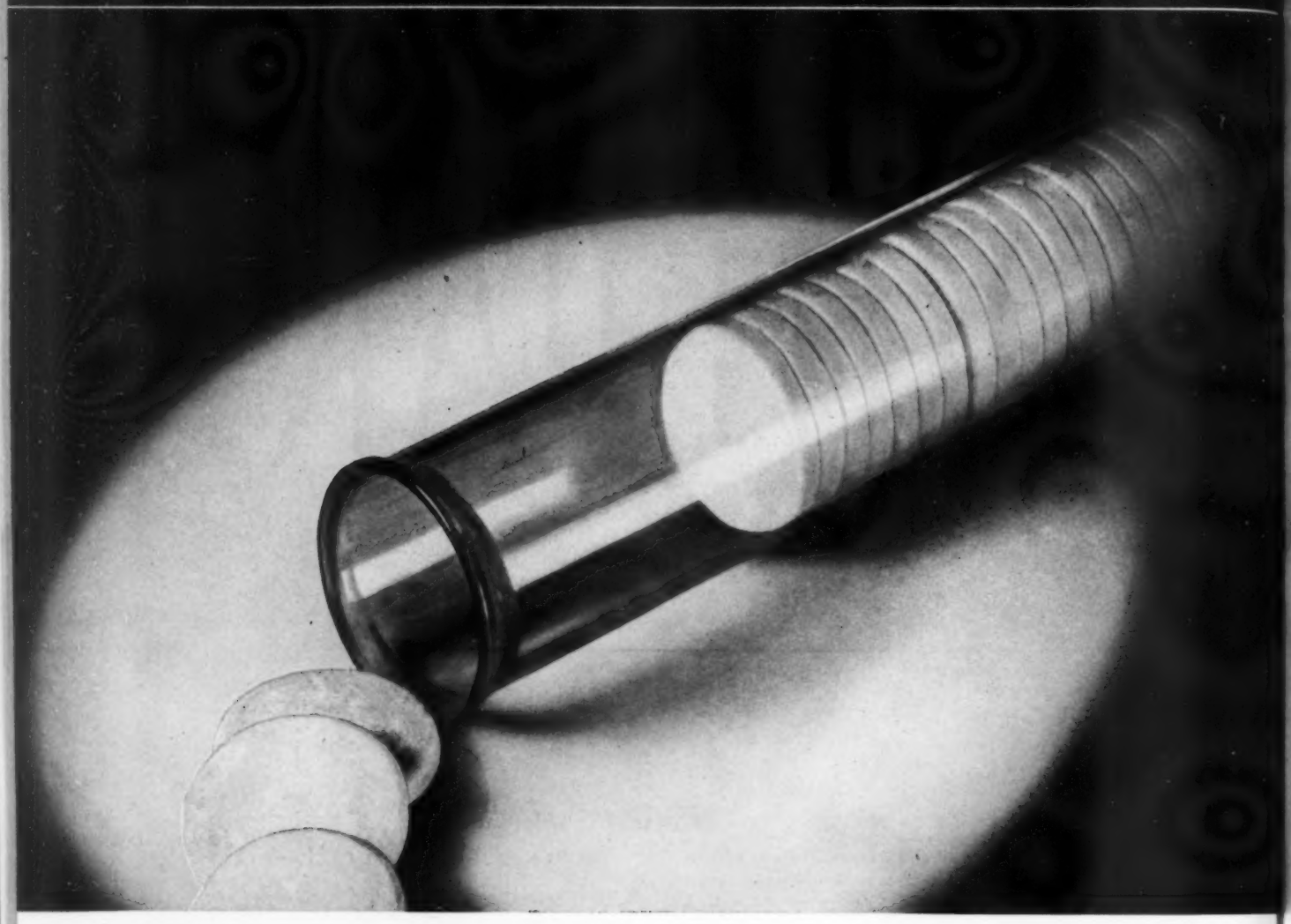
Not under ordinary temperatures. It begins to soften after 200° F. Underwriters' Laboratories classification, "slow burning."

6. How can it be fabricated?

It can be drawn, shaped, formed or folded into almost any shape with inexpensive dies. It can be embossed, stapled, printed, cemented, or combined with other materials.

VUEPAK: Reg. U. S. Pat. Off.

Three essentials• in making Bromide Preparations



○ *Fine chemicals of measured purity*

○ *Your technical skill in manufacturing*

○ *Rigid laboratory control in your plant*

Every day the physician prescribes bromides for sedation, to keep patients as comfortable as possible.

Manufacturers, using care and skill in the making, see to it that bromide preparations are of the highest quality and purity.

They achieve their results, not by a single factor, but by employing all three of these:

– they choose, first of all, fine chemicals of uniform and dependable quality.

– they scientifically compound all the ingredients into a quality-finished product.

– they maintain rigid laboratory control throughout the manufacturing procedure.

These are, indeed, "essentials."

And the first of them—the selection of the basic fine chemicals—can have much to do with trouble-free manufacture, and with the success of the finished product.

That's why it's good sense to choose fine chemicals with purity to predetermined standards—Baker's Fine Chemicals.

Baker's potassium, sodium and ammonium bromides are made in granulated forms particularly designed for direct compression into tablets. They also make unusually clear solutions.

Measured purity is the foundation upon which Baker has built its service to you. For many years, leading pharmaceutical and drug companies have known, and bought, Baker's fine chemicals (purity by the ton).

No matter what product you manufacture—if it requires one or more fine chemicals, specify Baker and you'll specify quality *at the beginning.*

J. T. Baker Chemical Co., *Executive Offices and Plant:* Phillipsburg, N. J. *Branch Offices:* New York, Philadelphia, Boston and Chicago

Baker's

FINE CHEMICALS

NEWS...

Robert Organizes Essential Oil Firms

Henri Robert has returned from an airplane trip to Paris, Grasse and Cannes, France where he spent five weeks completing the organization of the natural floral products house of Les Fils de Joseph Robert Paris, and making

HENRI ROBERT

final arrangements for the representation in the United States of Laboratories Synarome, Asnieres, near Paris, makers of aromatic specialties, by Henri Robert, Inc., 39 W. 60 St., New York.

Laboratories Synarome has been engaged in the creation and manufacture of aromatic specialties for about a quarter of a century under the direction of Hubert Fraysse. Their modern specialties have been used in the most successful perfumes of the past decade. Hubert's brothers, Georges and Andre are outstanding personalities among perfumers like their father, Claude Fraysse, who saw the birth of the Aromatic industry and took an active part in its development.

Henri Robert, and his brother Victor, who also spent all his life in the essential oil industry, constitute the firm of Les Fils de Joseph Robert. Their father the late Joseph Robert was a pioneer in the production of natural floral products. He was associated for some thirty years with one of the largest houses in Grasse and prior to that with Massignon Brothers in Cannes, where he developed in 1890 the volatile solvent extraction method for the production of concretes and absolutes. This process was later purchased by Antoine Chiris of Grasse.

Henri Robert was born in Grasse, France, and as he grew up, both he and his brother Victor, under the supervision of their father practiced various methods of extraction and studied the development of perfumes. After World War I he went to Paris where he was associated with some of the leading French perfume firms.

In 1945 he came to America and established his own company in New York to study and develop American products, collaborating with him is Louis Matigot.

Mr. Robert is optimistic about the outlook for the perfume and cosmetic industry in the United States. He feels not only will the consumption of perfumes and toiletries increase, but he has found as in France a serious trend to come back to the highest quality.

Dr. Waksman to Lecture in Moscow

Dr. Selman A. Waksman, discoverer of streptomycin, is enroute to Moscow to lecture on antibiotics before Russian scientists at the invitation of the Soviet Academy of Scientists.

During his stay abroad, Dr. Waksman, will visit the University of Liege, Belgium, where he will receive an honorary doctor's degree for his work in antibiotic agents which led to his discovery of streptomycin.

Dr. Waksman also is scheduled to lecture before scientific societies in Stockholm and Copenhagen.

Squibb Appointments

The appointment of William L. Arscott to the newly created post of field sales manager of E. R. Squibb and Sons, with headquarters in New York, together with ten other appointments within the Squibb sales organization have been announced. J. D. Neubauer is appointed manager of the Squibb plan division and will be in charge of relations with independent retail druggists.

Mr. Arscott, with Squibb since 1925, was for twelve years Pacific coast division manager, and more recently has been field sales administrator for sales west of the Mississippi. Mr. Neubauer was for the past five years division manager of the central division with headquarters in Cleveland.

Other appointments include Calvin E. Heminger, who becomes manager of the division formerly headed by Mr. Neubauer. Marvin A. Fortner, will succeed Mr. Heminger as division manager with headquarters in Kansas City. Also in Kansas City, John A. Burch has been appointed district manager succeeding Mr. Fortner. John T. Kelly has been appointed division office manager of the Kansas City branch.

CALVIN HEMINGER

In Boston, Allan M. McClain becomes professional service of the Eastern division, assist A. M. Covell, division manager. C. E. Pendergraft has been appointed Professional service director of the Southwestern division with headquarters in Houston. P. S. MacDougal, formerly of St. Louis, is the new Professional service director of the Northern division with headquarters in Chicago.

In the Southern division, Joe R. Watkins has been appointed district manager in Atlanta. L. P. Brown, formerly district manager in the Atlantic division is the new Professional service manager of the division and will concentrate much of his efforts in the Baltimore area.

Heyden Buys Phenol Plant

The Heyden Chemical Corporation, New York, has purchased a Memphis, Tenn., phenol, chlorine and caustic soda plant for $1,060,000, the War Assets Administration announced. The facility, leased by the Southern Acid & Sulphur Co., during the war, never had been in operation. The Heyden firm plans to produce phenol and related products.

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Additions to Arthur D. Little

Arthur D. Little, Inc., Cambridge, Mass., industrial research, has added some members to its staff. Daniel Reid Weedon, Jr., packaging specialist; Dr. Colin C. Reid, organic chemist; Dr. George P. Fulton, biologist and Garvin Bawden, Jr., market analyst.

Mr. Weedon was a partner in Package Materials Labs., Inc., after discharge from the Navy as a Lieutenant Commander. He served for a while at the Philadelphia Navy Yard, engaged in research on preservation and packaging of aeronautical material. Mr. Weedon is a graduate of M. I. T.

Dr. Reid was previously instructor in chemistry at Williams College and research chemist at Sprague Electric Co. He graduated from Princeton in 1938.

Dr. Fulton was recently discharged from the Army as a Captain. He had served as aviation physiologist. He is a graduate of Boston University.

Mr. Bawden previously served as supply officer to the Naval Supply Depot, Bayonne, N. J., where he did research in pallet-loading operations. He received his B. A. in business administration from Dartmouth.

Boyles Incorporate

The partnership of Harlow B. Boyle and Charles E. Boyle, Jr., with Jack H. Boyle as limited partner, has incorporated with the following officers: Harlow B. Boyle, president; Charles E. Boyle, Jr., vice-president; Jack H. Boyle, secretary; Eugene M. Elson, assistant secretary; Joseph W. Stone, treasurer and George Fox, Director.

Heads L. A. Rotary

Well-known western scientist Roger W. Truesdail, Ph.D., was installed president of the Los Angeles Rotary

ROGER W. TRUESDAIL

Club, June 28. Dr. Truesdail is president and director of Truesdail Laboratories, Inc., chemists and bacteriologists.

Chemistry Industry Medal to Dr. Dow

Dr. Willard H. Dow has been awarded the Chemical Industry Medal for 1946, Sidney D. Kirkpatrick, chairman of the American Section of the Society of Chemical Industry, announced. The presentation will be made to Dr. Dow at a dinner at the Hotel Commodore in New York, November 8.

President and chairman of the Dow Chemical Co., of Midland Mich., wartime leader in the production of synthetic rubber and pioneer in sea-water chemistry, through which science and industry recover raw materials from the ocean, Dr. Dow was cited for his "conspicious service to applied chemistry."

R. H. de Greeff (left), president of R. W. Greeff & Co., being congratulated by Ira Vandewater, vice-president, upon the celebration of Mr. de Greeff's fortieth year with the Company. Mr. de Greeff is holding a delft plate made in Holland and specially designed in commemoration of the anniversary. It shows the Thames House in London where Mr. de Greeff started with the firm, and Radio City where the firm now is located.

McCaul of Africa Visiting Here

Gilbert J. McCaul, director, Industrial Research Assn., Ltd., Johannesburg, South Africa, has arrived in New York for a six month visit. Mr. McCaul is interested in discussing cosmetic manufacturing opportunities in South Africa with American manufacturers of cosmetics also with makers of cosmetic machinery and machinery for manufacture of cosmetic packaging and accessories.

Makers of established advertised trade-marked cosmetics who are interested should write to International Associates, 27 E. 38 St., New York 16.

Walker Announces Grant

Myron Walker, president of Walker Vitamin Products, Inc., Mount Vernon, N.Y., has announced the grant of $1,000 to the University of Cincinnati to support investigation on nutrition under the direction of Dr. Tom D. Spies.

Theis Heads J. L. Hopkins & Co.

With the death of Jesse L. Hopkins, Louis Theis has been elected president of J. L. Hopkins & Co. The company will continue in business.

Hawkins Heads American Ferment

Appointment of John M. Hawkins as president of the American Ferment Co., Inc., a subsidiary of Sterling Drug Inc., has been announced by James Hill, Jr., president of the parent company. Mr. Hawkins was formerly vice-president of the subsidiary.

A native of Cincinnati, Mr. Hawkins began his business career in 1921 in the sales and advertising department of the Odorono Co., remaining with that firm until 1928. He was a partner in the Hydrosol Co., of Cincinnati until 1942 when he joined the Sterling organization.

Monsanto Gives Academic Leave

Monsanto Chemical Co., has awarded leaves of absence at full salary for an academic year of study at universities of their own choice to four of their industrial scientists.

The move is to enable scientists to renew their studies and to establish close cooperation between industry and the university laboratories.

Named to receive the awards were: Louis P. Wenzell, Jr., St. Louis, Mo.; Colver P. Dyer of Winchester, Mass.; Carlyle John Stehman of Dayton, Ohio, and Eli Perry of Springfield, Mass.

Dr. Mende Joins Ortho Products

Dr. William C. Mende has joined the staff of Ortho Products, Inc., of Linden, N. J., as director of pharmaceutical development, he will be in charge of research, control and pilot plant operations.

DR. WILLIAM C. MENDE

For the past ten years he was associated with William R. Warner and its subsidiaries.

Czechoslovakian Glassware

De Boer & Livingstone, Inc., as a result of a recent trip to Czechoslovakia by M. P. Livingstone, have succeeded in obtaining a limited supply of their former hand cut crystal perfume bottles and powder jars.

The company announced the formation of a new corporation to be known as Morlee Creations, Inc., which will take over the foreign interests of De. Boer & Livingstone, and distribute goods in the United States.

The new corporation's showrooms are located at 10 E. 39 St., New York, and it will use the same sales representatives as the original company.

Warner Brothers Building

The Warner Brothers Co., of Bridgeport, Conn., has started the erection of a modern building to take care of their folding box department.

The new factory, modern throughout, is to be of cement and steel construction, brick face and will contain approximately 84,000 square feet of floor space. Glass brick is to be used in the windows.

Scott Resigns from Maltbie

Robert C. Scott for over seventeen years purchasing agent for the Maltbie Chemical Co., has resigned from the company to become the executive secretary of the James M. Jarvie Commonwealth Service of New York.

Pineoleum Co. Name Change

Effective July 1, the Pineoleum Co., changed their name to Baybank Pharmaceuticals, Inc., division of Chesebrough Mfg. Co., the address is 17 State St., New York 4.

Dr. Rotondaro Joins Bristol

Dr. Felice Angelo Rotondaro, for 11 years a member of the research unit of the drug division of the Food and Drug Administration, recently joined the staff of Bristol Laboratories, Inc., penicillin plant in Syracuse. He is head of the Chemical control department.

A native of Italy, Dr. Rotondaro was brought to this country as a child, grew up in Pennsylvania and received his B.S. from the University of Pittsburgh.

He joined Zemmer Co., pharmaceutical chemists, and for nine years was a member of their staff as well as working as a graduate assistant at the University of Pittsburgh and completing the requirements for his doctorate, which he received in 1932 for a thesis on the development of microbiology.

DR. ROTONDARO

Joining the FDA in 1935, he did analytical and regulatory work in field stations for five years and then was transferred to the research unit of the drug division in Washington.

Col. Kimble on Owens Board

Col. Evan E. Kimble, founder and for many years head of the Kimble Glass Co., was elected a member of the Owens-Illinois board. He succeeds C. B. Belknap, who will devote his time to coordinating the research projects of Owens-Illinois.

The Kimble Glass Co., will continue in operation as a wholly owned subsidiary. The assists and business of Kimble were acquired for a consideration of 264,160 shares of Owens-Illinois common stock.

Powell's 23rd Anniversary

John Powell & Co., Inc., 1 Park Ave., New York, celebrated its twenty-third anniversary in July, the president John Powell announced.

The Powell company, a pioneer in the insecticide field, had its beginning in a small establishment in downtown New York 23 years ago. As a result of a policy of devoting its entire manufacturing efforts exclusively to insecticides and related products, the company holds the position of being one of the largest in the insecticide industry today.

Klein—Chesebrough President

At a meeting of the board of directors of the Chesebrough Mfg. Co., Charles E. Klein, assistant treasurer of the company was elected treasurer and director in place of Joseph A. Ebert, former treasurer and director, who has resigned on account of ill health.

The appointment of William J. Haggerty as assistant treasurer and Charles W. Ruppersberg as internal auditor was also announced.

Two P. D. Agencies

Due to marked increase in the Parke-Davis advertising program embracing an enlarged direct mail campaign, the advertising agency of Murray Breese Associates, Inc., and L. W. Frohlich & Co., Inc., will split Parke-Davis professional advertising commencing August 1.

Dale Seif Joins Squibb

Dale Seif formerly chief chemist of the Wm. S. Merrell Co., Cincinnati, and well known in the industry for his contributions to the literature on control and analytical methods has taken a position with E. R. Squibb & Sons, in their Biological and Chemical Laboratories in New Brunswick, N. J.

DALE SEIF

ADVERTISEMENT—*This entire page is a paid advertisement* *Prepared Monthly by U. S. Industrial Chemicals, Inc.*

U.S.I. CHEMICAL NEWS

AUGUST ★ A Monthly Series for Chemists and Executives of the Solvents and Chemical Consuming Industries ★ 1946

New Concentrates Produce Superior Household Sprays

Potent New Chemical Augments Pyrethrins In D&O Pyrenones

New concentrates, which will permit the manufacture of highly effective, low-cost household sprays, have been announced by Dodge and Olcott, Inc. Known as D&O Pyrenone Concentrates, they are carefully-proportioned combinations of pyrethrins with a new D&O-developed chemical, piperonyl butoxide (D&O No. 333). Liquid insecticides and aerosols made with this new compound are superior to straight pyrethrum insecticides in range of effectiveness, stability, and residual killing power. They are completely free from toxicological hazards, irritation, odor, and other undesirable characteristics.

Only one of these compounds — Pyrenone No. 20 *New* — is ready for use at the present time. It is considered to be the ideal formulation for the manufacture of liquid general-purpose household insecticides. Other Pyrenones will be announced within the next few months. Adequate amounts of these compounds for experimentation and testing are now available. Full-scale commercial deliveries will begin in the late fall, and ample supplies will be ready in time for the 1947 season.

New Chemical

Piperonyl butoxide (D&O No. 333), the new chemical developed by Dodge and Olcott, Inc. to augment straight pyrethrins, is a close relative of the already well-known piperonyl cyclohexenone (D&O 312). Piperonyl cyclohexenone has been, and is, giving extraordinary results in agricultural and certain other fields, and has been used very effectively in the formulation of household

(*Continued on next page*)

Urethan Holds Promise In Treatment of Leukemia

A definite palliative effect is noted in many cases of leukemia when urethan treatments are used, according to the findings of a group of British scientists. Up to the present, however, no cure has been discovered for this disease which is known as "cancer of the blood."

The British scientists state in a recent issue of a medical journal that in the most favorable cases treated with urethan, a fall in total white blood count to normal limits and a rise in hemoglobin were noted. They also claim to have observed enlarged lymph nodes and a reduction in the size of the spleen.

The results reported are similar to those obtained from X-ray therapy which has been employed for some time to give temporary relief and to prolong life in the chronic forms of the disease. Prior to the use of urethan, many drugs, including arsenic and benzene, were tried, but with little success.

U.S.I. Completes Plans for New Chemical Research Laboratory

Project At Stamford, Conn., Will Be Devoted To Research On Resins, Solvents, Organic Chemicals, And Manufacturing Methods

With the completion of plans for a new chemical research laboratory, another project in U.S.I.'s postwar program of expansion is now under way. A site for the building, which will house more than 200 skilled investigators, has been selected at Stamford, Conn. About half of the total 100,000 square feet within the walls of the new laboratory and auxiliary buildings will be devoted to U.S.I. projects; the other half will be used for research activities of Air Reduction Company, Incorporated.

U.S.I. research conducted at this laboratory will be concerned with solvents, resins, organic chemicals, and engineering development. A pilot plant, suitable for carrying out fairly large scale experiments, will be available in order to obtain information for building commercial-size plants.

Complete Facilities

The laboratory will be equipped with the most modern research facilities. Some of these, such as the technical library, the patent files, the drafting room, the analytical laboratory, the machine shop, and the physics laboratory will be shared by the research staffs of U.S.I. and Air Reduction.

The laboratory buildings will be red brick structures of modified colonial design. The main building will be three-stories high, L-shaped, with a clock tower at the juncture of the two wings. The separate laboratories of Air Reduction and U.S.I. will occupy the two larger wings, and a smaller wing will house equipment for pilot plant operations.

To Occupy 40 Acres

Title to 40 acres of land to accommodate the proposed laboratories and pilot plant has been acquired. The site of the new laboratory is in the western part of Stamford, and can be seen from the main line of the New York, New Haven & Hartford Railroad at a point about a mile south of the Stamford station. One corner of the 40-acre plot runs into the Township of Greenwich.

At present the chemical research laboratories of Air Reduction and U.S.I. are situated at 41 Magee Avenue, Stamford, where Air Reduction's liquefaction research laboratory and rare gases division are also located.

THE MONTH IN RUBBER

An antiseptic rubber, also claimed to be insecticidal, is invented . . . A new anti-aging substance for rubber sole mixtures is announced . . . Testing procedures for evaluating natural and synthetic rubbers are catalogued . . . A new blowing agent for sponge rubber is developed . . . A material said to be similar to GR-S, and compatible with natural rubber and numerous other synthetic rubbers, goes into full-scale production . . . Rubber bones for dogs are now chocolate flavored . . . A new plasticizer and extender for latex is put on the market . . . Inner tubes made with GR-I (Butyl) rubber are stated to have superior resistance to tearing . . . A chlorinated synthetic rubber is made available . . . Graphs showing market prices of rubber products from 1910 to 1945 are published . . . A new wax emulsion for use on rubber products of any color is produced.

U.S.I. Announces New Natural Feed Ingredients

Supplementing its line of feed ingredients which include Special Liquid Curbay, Curbay B-G, and Vacatone, U.S.I. is now offering two natural riboflavin products obtained from vegetative fermentation operations. They are *U.S.I. Brand Riboflavin Mixture #1*, containing one gram of active riboflavin per ounce of material, and *U.S.I. Brand Riboflavin Concentrate #85*, consisting of 85 parts per hundred of active riboflavin along with a natural carrier and a new vitamin of the B-complex. Inquiries should be directed to U. S. Industrial Chemicals, Inc.

Artist's conception of the new chemical research laboratory at Stamford, Conn., scheduled for completion within a year.

ADVERTISEMENT—*This entire page is a paid advertisement.*

AUGUST ★ **U.S.I. CHEMICAL NEWS** ★ 1946

Addition of Methionine Spurs Growth Of Rats on Protein-Deficient Diet

When added to a diet low in protein, methionine can significantly increase the growth-rate of rats, according to a paper presented recently before an American scientific society. The authors also claim that the addition of methionine aids the rats in resisting high concentrations of benzene in the atmosphere. Methionine, one of the ten essential amino acids, is now being synthesized by a U.S.I. process which cuts costs about 97 per cent.

Four groups of 6-9 male albino rats, weighing about 180 grams each, were fed a protein-deficient diet, consisting of 69 per cent sugar, 9 per cent casein, 15 per cent lard, 4 per cent salt mixture, and 3 per cent cellophane with 500 mg. of yeast and 2 drops of cod liver oil daily. The diet of two groups was supplemented with 0.8 per cent of methionine daily. One group on the basic diet and one on the supplemented diet were exposed to an atmosphere of 90 per cent benzene for 42 hours weekly.

Both the methionine groups gained significantly more weight than their corresponding basic groups. The methionine group which was exposed to benzene showed far less ill effects than the basic group.

New Concentrates

(Continued from preceding page)

insecticides. However, its newer relative, piperonyl butoxide, has unique advantages, particularly in oil base sprays and in aerosols, because of its greater effectiveness against common household insects and its complete solubility in the mediums used for dilution.

Piperonyl butoxide is a colorless, odorless liquid completely miscible with mineral oils and readily soluble up to any desirable proportions in Freon-12 and other gases used in aerosols. Pyrenone concentrates, therefore, require no secondary solvents or coupling agents, thus avoiding all the complications and the toxicological hazards which might occur from their use.

Piperonyl butoxide is an insecticide when used alone. It will kill many varieties of insects at reasonably low concentrations, but its action is slow. When it is combined with even minute proportions of pyrethrins, the speed of action is immensely increased, and the concentration required to produce effective results is greatly decreased.

Pyrenone No. 20 *New*

After a long series of tests utilizing various combinations of piperonyl butoxide and pyrethrum, Pyrenone No. 20 *New* was developed as an ideal concentrate for the manufacture of general-purpose household sprays of the oil types. It can be used at 1-to-19 dilution with any suitable base oil. The result will be a crystal-clear solution having the characteristic light golden yellow of pyrethrum sprays. Both the concentrate and the sprays made from it have only a faint natural pyrethrum odor, and whatever odor may derive from the base oil used as a diluent.

Pyrenone sprays made at the recommended 1-to-19 dilution without the addition of any other toxic ingredient will be found to have rapid and satisfactory knockdown when tested under the usual conditions. By Peet-Grady standards, a Pyrenone spray made at 1-to-19 dilution is far above the minimum for a Grade AA spray. Pyrenone sprays will be found to be satisfactorily effective against the customary range of household insects.

Pyrenone is a registered trade mark of Dodge and Olcott, Inc.

Easy Drum-Handling

This new all-metal drum support comes from its manufacturer packed in its own, individual carton ready for mounting. It is claimed to convert any metal drum into a dispenser in a few minutes.

TECHNICAL DEVELOPMENTS

Further information on these items may be obtained by writing to U.S.I.

To prevent leakage from broken acid bottles a new acid-resistant coating is announced which is said to provide a protective armor around the bottles, and to hold its shape even though the glass underneath is shattered. **(No. 093)**

USI

An automatic paint brush cleaner, described as a unit consisting of a patented device and a special liquid, is reported to do a rapid and complete job, even removing the paint in the heel of the brush. **(No. 094)**

USI

To put out solvent fires, as well as gas and oil fires, a mechanical foam has been developed, which is claimed to meet all the rigid conditions of the new joint Army-Navy specifications. **(No. 095)**

USI

A new rustproofer for steel is described as protecting metal during the manufacturing stages and permitting a tighter bond with paints. **(No. 096)**

USI

To withstand 1,000 degrees F., new glass-based coatings are announced which are alleged to be rustproof, solventproof, and abrasionproof, and to withstand a 200-hour salt-spray test. **(No. 097)**

USI

A new moisture tester makes 3 moisture determinations per minute on sheet material, such as paper, cardboard, and veneer, according to the manufacturer. **(No. 098)**

USI

To evaporate heat-sensitive solutions, or solutions which tend to decompose, discolor, or separate in crusts, is the purpose of a new "rapid current evaporator." The apparatus is readily adaptable to plant operating conditions, the makers state. **(No. 099)**

USI

To speed textile finishing, a new catalyst is announced which is described as odorless, and water soluble. It is claimed to accelerate the action of thermoplastic resins used in finishing textiles. **(No. 100)**

USI

A new-type continuous viscosimeter is described as permitting instantaneous observation of viscosity values existing in a moving fluid stream under full-line pressure. **(No. 101)**

USI

A cold-setting padding glue, claimed to resist extremes of heat and cold, can be applied by hand brush or spray gun, according to the manufacturer. One gallon is reported to cover 200 square feet of padding area. **(No. 102)**

USI

To paint any automobile in one hour without the use of brushes or spray guns is the purpose of a new material which is reported to produce a factory-like job. The material is sold with a two-year guarantee. **(No. 103)**

U.S.I INDUSTRIAL CHEMICALS, INC.

60 EAST 42ND ST., NEW YORK 17, N. Y. U.S.I. BRANCHES IN ALL PRINCIPAL CITIES

ALCOHOLS
Amyl Alcohol
Butanol (Normal Butyl Alcohol)
Fusel Oil—Refined

Ethanol (Ethyl Alcohol)
Specially Denatured—all regular and anhydrous formulas
Completely Denatured—all regular and anhydrous formulas
Pure—190 proof, C.P. 96% Absolute
*Super Pyro Anti-freeze
*Solox proprietary Solvent

***ANSOLS**
Ansol M
Ansol PR

ACETIC ESTERS
Amyl Acetate
Butyl Acetate
Ethyl Acetate

OXALIC ESTERS
Dibutyl Oxalate
Diethyl Oxalate

PHTHALIC ESTERS
Diamyl Phthalate
Dibutyl Phthalate
Diethyl Phthalate

OTHER ESTERS
*Diatol
Diethyl Carbonate
Ethyl Chloroformate
Ethyl Formate

INTERMEDIATES
Acetoacetanilide
Acetoacet-ortho-anisidide
Acetoacet-ortho-chloranilide
Acetoacet-ortho-toluidide
Acetoacet-para-chloranilide
Alpha-acetylbutyrolactone
5-Chloro-2-pentanone
5-Diethylamino-2-pentanone
Ethyl Acetoacetate
Ethyl Benzoylacetate
Ethyl Alpha-Oxalpropionate
Ethyl Sodium Oxalacetate
Methyl Cyclopropyl Ketone

ETHERS
Ethyl Ether
Ethyl Ether Absolute—A.C.S.

FEED CONCENTRATES
*Curbay B-G
*Curbay Special Liquid
*Vacatone 40 • Riboflavin Concentrates

ACETONE
Chemically Pure

RESINS
Ester Gums—all types
Congo Gums—raw, fused & esterified
*Aroplaz—alkyds and allied materials
*Arofene—pure phenolics
*Arochem—modified types
Natural Resins—all standard grades

OTHER PRODUCTS
Collodions
Ethylene
Ethylene Glycol
Urethan
Nitrocellulose Solutions
dl-Methionine

*Registered Trade Mark

Printed in U.S.A.

Terrell Joins T.G.A.

William J. Terrell has joined the staff of the Toilet Goods Association, Inc., as assistant to S. L. Mayham, executive vice-president. Mr. Terrell graduated

WILLIAM J. TERRELL

from Oregon State University in business administration.

He served with the Third Army during the war as a combat infantry officer, wears the Purple Heart and holds the Bronze Star and the Silver Star for gallantry in action.

Ernest Rossiter Elected Director

Robert Gair Co., container manufacturer, New York, has elected Ernest Rossiter as a director, succeeding Edward K. Bachman. Mr. Rossiter is president of the Southern Paperboard Corp.

Evans Depilatories Sold

Sharp & Shearer have purchased Evans Depilatory Cream and Evans Depilatory Powder. The purchase includes the complete manufacturing machinery for the two products, both of which will go into immediate production in the Sharp & Shearer, Reading, Pa., plant.

President Stanford G. Shearer said that the same outlets will be used for both the cream and powder as in the past.

Greil Buys Mentho-Mulsion

The Mentho-Mulsion Co., of Atlanta, Ga., has been purchased by the Greil Drug & Chemical Co., Pittsburg, at a sale price of $67,500.

The purchase brings into one drug family Mentho-Mulsion, one of the trade's leading cough syrups, and Camthomint, a vaporizing ointment. In addition to these two, the Greil company will manufacture and sell a line of toiletries under the trade name of Gallant and an extensive line of pharmaceuticals and chemicals.

Douglas B. Oxenham, managing director of Bristol-Myers Co., Ltd., Australia, has arrived in the United States to observe latest developments in equipment and processes of Bristol-Myers. Pictured with Mr. Oxenham are E. G. Ladewig (Left) and W. L. Bomer (Right), assistant vice-president and vice-president respectively, of Bristol-Myers Co., New York.

Owens-Illinois Appointments

Appointments to key positions within Owens-Illinois Glass Co., have been announced by company officials.

Kenneth C. White, general sales

KENNETH WHITE

manager of the Libby Glass division, has been made sales promotion manager of the glass container division succeeding Howard A. Trumbull who resigned recently to enter business for himself.

William M. Beckler has been made manager of table glassware sales of the Libby division while Ripley W. Rogers continues as manager of Libbey's Industrial Products sales.

Moore Joins Davis Filtration

W. F. Moore has joined the Davis Filtration Equipment Co., Inc., 60 Wall St., New York, as vice-president in charge of manufacturing and technical director on filter processes.

Mr. Moore was formerly vice-president of American Seitz Filters, now Republic Filter.

Kelly Joins Le Galion

A. J. Kelly has joined Le Galion Sales Co., importers and distributers of Parfums Le Galion Paris.

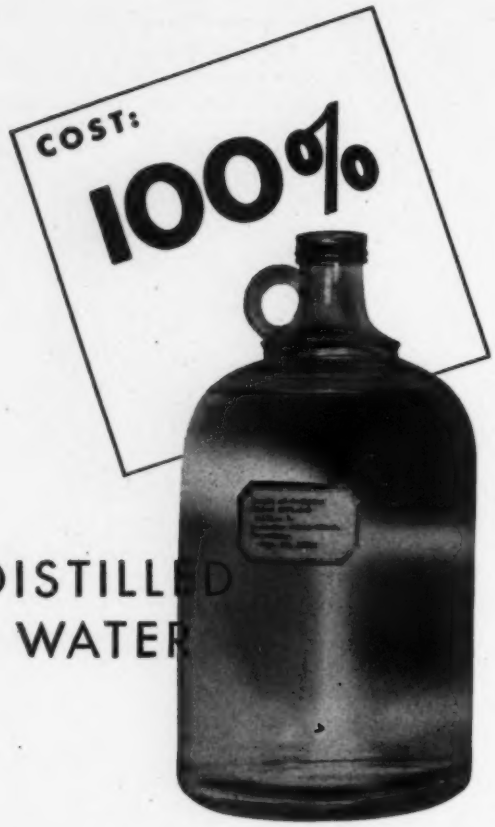
Wechsler Joins Tuteur

Fred Wechsler, who for the last five years held an executive position with James McCreery & Co., has joined Tuteur & Co., Inc.

Sapery Opens Own Office

Stanley Sapery has resigned as sales manager of Victor Metal Products Corp., and is opening his own office as manufacturers' representative at 11 E. 44 St., New York.

He will represent Victor for certain accounts but will take on other lines rounding out a complete package service specializing in plastics.



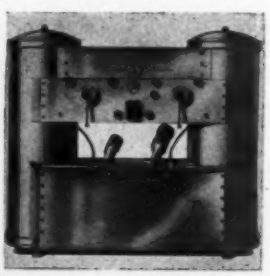
DISTILLED WATER

COCHRANE DEMINER-ALIZED WATER

For Commercial Purposes they are Identical in Purity

Here is a new process by Cochrane that is of vital importance to the manufacturer of pharmaceuticals, chemicals, beverages, food and other process-manufactured products. When the cost of pure water, commercially equivalent to distilled water, can be reduced to as low as one-twentieth of its present cost, the result is bound to show up favorably in terms of profits—and it is high time something should be done along these lines.

The process is the relatively new one of removing minerals or salts from water by ion exchange and acid adsorption. The water is first passed through a carbonaceous or resinous ion exchange (zeolite) which has the ability to exchange metallic ions for equivalent quantities of hydrogen. The effluent is then passed through a resinous material which adsorbs the mineral acids. The carbonic acid which has been unchanged by the process, if objectionable, can be removed by passing through a Decarbonator.



A new self-contained unit with reaction tanks, chemical tanks, special piping and all necessary fittings. Only ordinary piping and electrical connections needed to install. Write for a copy of Publication 4181 and details of the new Model CDM Unit.

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*Firm*_____

*Address*_____

*City*_____ *State*_____

Herchelroth Heads Lancry de Paris

J. Hilary Herchelroth, president of Oracle Labs., New York, has been elected president of Lancry de Paris, Inc., perfumers and an essential oil house Cresp Martinenq, representing them in this country.

J. H. HERCHELROTH

Mr. Herchelroth will leave for France in September to visit these companies to observe their production methods and give them the latest on American processes of production.

Anchor Serum Names Jensen-Norman

H. J. Jensen-Norman, has been named director and chief chemist of the new pharmaceutical division of the Anchor Serum Co., of South St. Joseph, Mo., True Davis, Jr., vice-president of Anchor has announced.

Additions to Stearn's Staff

Ray C. Brewster, vice-president in charge of sales, Frederick Stearns & Co., division, Sterling Drug Inc., announces the addition of seven new members to the company's sales staff. J. R. Boland is the sales representative covering eastern Connecticut and Rhode Island and John P. Pinborough, sales representative for Utah and Idaho. Added as detailists are George A. Edwards, St. Louis; Emil A. Frei, Chicago; Edward F. Angode, Detroit; Julian Jaret and R. N. Kinsley, New York City.

McKelvy Co. Advances Carman

John Carman, formerly assistant to the president of Alfred D. McKelvy Co., makers of Seaforth toiletries, has been appointed sales promotion manager. Mr. Carman served in the war as a Lieutenant Commander in the Navy and before that was an executive of the Vick Chemical Co.

Wyandotte to Make Glycols

After producing inorganic chemicals and cleaning materials for more than fifty years, the Wyandotte Chemicals Corp., plans to enter the organic chemicals field on a large scale.

To achieve this purpose, the corporation plans to spend $25,000,000 for additions to its present plants within the next eighteen months.

Principal product of a new glycol unit will be a substantially pure grade mixture of ethylene and propylene glycols. Other products of the glycol unit will include chloroethers, polyglycols and solvent naphthas. The plant will utilize a process not now in commercial operation and protected by patents owned by Wyandotte Corp.

Pressler Returns to Naugatuck

Charles E. Pressler, has returned to the laboratories of Naugatuck Aromatic's, division of U. S. Rubber Co.

Mr. Pressler left the company in 1942 to join the army and was attached to a Signal Corp unit, he went overseas the

C. E. PRESSLER

following year and was stationed for some time in England. At the war's end he was stationed in Bremen, Germany, remaining there until March of this year.

---

van Ameringen to France

Arnold L. van Ameringen, president of van Ameringen-Haebler, Inc., flew to Paris August 4 for a month's visit with associates and principals in the perfume and flower oil industries of France, Holland and England.

Accompanying Mr. van Ameringen on his tour will be Dr. James H. McGlumphy, vice-president in charge of the flavor department of the organization. Both Mr. van Ameringen and Dr. McGlumphy plan to return early in September.

Dr. Slesser Joins Bristol Labs.

Dr. Abram E. Slesser has joined Bristol Laboratories Inc., where he has been made supervisor of compounding at the pharmaceutical division in Syracuse. He was formerly chief research chemist in the pharmaceutical research and de-

DR. A. SLESSER

velopment laboratory at Burroughs-Wellcome Co., Tuckahoe.

Born and brought up in Indiana, Dr. Slesser received his B.S., M.S. and Ph.D. degrees from Purdue University. Awarded a three-year graduate fellowship by Eli Lilly & Co., he received his doctorate in 1939.

After teaching pharmacy and pharmaceutical chemistry for a while at Valparaiso University, North Pacific College at Portland, Oregon, he joined Burroughs-Wellcome Co., in 1942.

Abbott Expansion

As part of an expansion program, Abbott Laboratories has started construction of additions to its research and administration buildings at a cost estimated at $1,266,000.

The extension to the research laboratory will provide an additional 56,000 square feet of space, doubling the size of the research erected in 1938.

Enlargement of the administration building will double its size and provide space for offices at present housed in buildings designed and urgently needed for manufacturing purposes. E. A. Ravenscroft, director and chief engineer said he expected both buildings to be finished in a year.

Marshburn Quits Northam Warren

Preston W. Marshburn, associated with Northam Warren Corporation for about the past fifteen years, has resigned his position as vice-president and severed all connection with the corporation.

Whitehall Advances Hill

Howard D. Hill, formerly sales representative in southern California for the Whitehall Pharmacal Co., has been promoted to the position of divisional sales manager for the firm's western division.

Mr. Hill has been allied with the sales

HOWARD D. HILL

and merchandising of nationally advertised products in both the food and drug fields for more than 14 years.

New Stearns List

A new issue of the Retail Trade Price List of the Frederick Stearns & Co., division, Sterling Drug Inc., will be ready for distribution in September. It will be number 91 of the series, started when the company was founded in 1855.

Copies will be available on request to H. M. Jackson, Manager, Price and Quotation department, Detroit, after September 1.

Winthrop Expands Detail Staff

A program calling for the addition of approximately fifty more men to the present detail staff of Winthrop Chemical Co., has been announced by Joseph Noh, vice-president in charge of sales.

This program was developed under Mr. Noh's direction in all of the company's eighteen professional service offices. Managers of Winthrop professional service offices have received special instruction dealing with the job description and specification requirements for measuring applicants as well as recruiting methods to be used. All factors involved in selection have been specifically prepared for pharmaceutical sales and detail applicants.

The program calls for personal interview so applicants should contact managers of the professional service office in the area they reside, or communicate with the home office at 170 Varick St., New York 13, N. Y. for information.

Dr. Vincent Joins Abbott

The appointment of Dr. Hugh C. Vincent to the pharmaceutical research department of Abbott Laboratories has been announced by Dr. E. H. Volwiler, executive vice-president of the company.

Dr. Vincent comes to Abbott Laboratories from Washington State University where he was assistant professor of pharmacy. He received the Ph.C., B.S. and M.S. degrees at the State College of Washington. In 1942 he was awarded the American Pharmaceutical Association Research Fellowship at Purdue University where he received the Ph.D., degree.

Kolb Elected Division Vice President

The board of directors, Winthrop Chemical Co., Inc., have elected Val Kolb divisional vice-president in charge of the special markets division.

The special markets division is engaged in marketing throughout the United States and Canada vitamins used by the food and pharmaceutical industries.

Formerly president of the Provident Chemical Works at St. Louis, Mr. Kolb has been identified with the development and sale of chemicals to the food industry for more than 25 years. He was associated with the Swann Chemical Co., Birmingham, Ala., shortly after the first World War, and with the American Agricultural Chemical Co., of N. Y. from 1935 to 1938.

Chemical Salesmen's Golf

Approximately 120 attended the Chemical Salesmen's Association golf outing at the Winged Foot Golf Club in Mamaroneck, N. Y., on July 24.

Among the winners were: Jack Henry, of Joseph Turner & Co.; L. Brennesholtz, of Centaur Co., division, Sterling Drug Co.; Charles Alexander, of L. Sonneborn Sons, Inc.; Paul Hiller, of Innis, Speiden & Co.; H. R. Miller, of McKesson & Robbins, Inc.; Wm. B. Mullen, of Joseph Turner & Co.; J. C. Abeles, of Faesy & Besthoff, Inc.; Charles W. Frost, of Prior Chemical Corp.; R. C. Quartrop, of the Barrett division, Allied Chemical & Dye Corp.; Russell F. Dixson, of William D. Neuberg Co.; George Uhe, of George Uhe Co.; Tom Morgan, of MacNair-Dorland Co.; C. W. French, of Oldbury Electro-Chemical Co., and E. L. Collins, of Chilean Nitrate Sales Corp.

Gloria Vanderbilt Corp. To Issue Shares

Gloria Vanderbilt Corp., of New York, has registered with the Securities and Exchange Commission 300,000 shares of $1 par value common stock which will be offered to the public at $3 a share by Elder Wheeler & Co. Net proceeds will be added to working capital and available for corporate purposes.

Arthur L. Fletcher

Arthur L. Fletcher long associated with the cosmetic and toiletry departments of S. S. Pierce Co., Boston, died July 13, in that city.

Regarded as the man who had done so much to put the company in its favorable position with the cosmetic industry, Mr. Fletcher had a long and varied experience in the cosmetic field. Previous to joining the Pierce company he had been European buyer for R. H. White Co., of Boston, after which he was general manager of Miro-Dena, a New York perfume firm.

Mr. Fletcher became affiliated with the S. S. Pierce Co., in 1920 as head of their drug and perfume departments and was responsible for its growth.

The passenger plane used to take executives of Bristol-Myers Co., from city to city, is sometimes used to rush shipments of Bristol penicillin where it may be needed. Here are two laboratory workers loading the plane at Syracuse, N. Y.

Problem Child . . .

For that extra "Sales Punch" bring your problem child to us!

For years Warnercraftsmen have been taking manufacturers' packaging problems and licking them into distinctive sales producing containers. Conscientious consideration of your product's requirements by our skilled designers and craftsmen gives your package that important individual look which will subtly but definitely identify your product.

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Makers of set-up and folding boxes of all types, transparent acetate containers, hand made specialties, counter displays and dispensers.

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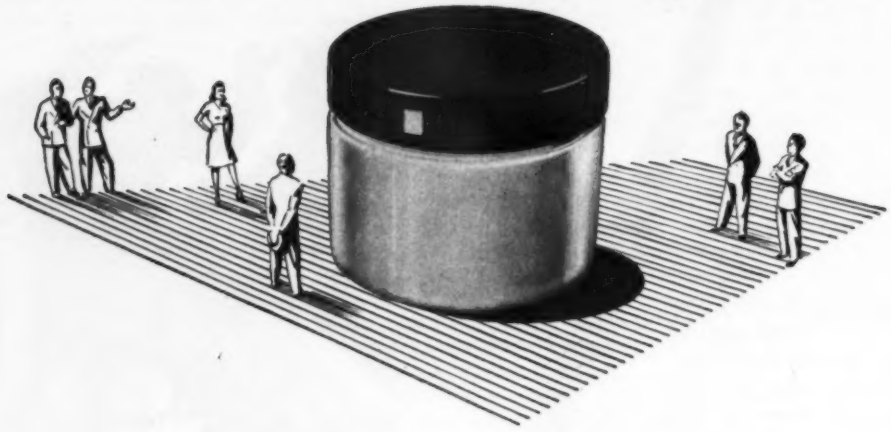
LET'S LOOK AT *MeritSEAL*



Meritseal's beauty is obvious. One glance, and you know that here is a cap worthy of the finest cosmetic package. But underneath Meritseal's impressive exterior there is a sound foundation of skilled engineering and research and painstaking manufacture. Here are the features responsible for Meritseal's popularity with manufacturers of quality cosmetics.

[redacted] are bright and cheerful . . . for sales appeal. They're hard and tough . . . to resist scratching and scarring. They're lacquered or lithographed . . . to meet individual requirements.

[redacted] is simple and efficient . . . it consists of a fabricated sheet metal shell into which is inserted a suitable liner and a thread made from a strip of noncorrosive metal or aluminum. The thread is formed into a ring, holding the liner in position. The lower edge of the shell curves inward, locking the thread in place.

[redacted] emphasizes pronounced contours and uniformity of pitch. Maximum sealing efficiency is assured and any tendency of cap freezing to the container is eliminated.

[redacted] range from 48 mm. to 89 mm. and soon larger sizes will be available. Special sizes can be made with the addition of a nominal tool charge.

[redacted] have been reduced since its introduction. The greatly increased demand for Meritseal and improved manufacturing processes have enabled us to effect economies that mean savings in Meritseal's cost to you. Better still, look at Meritseal itself. Your request will bring complete information and samples in the sizes and colors you prefer.

CROWN CORK SPECIALTY CORPORATION, DECATUR, ILL. *DIVISION OF CROWN CORK & SEAL CO.*

NEW YORK: 60 EAST FORTY-SECOND STREET • CHICAGO: 4343 WEST FIFTH AVENUE

Wintersmith Opens N. Y. Office

Wintersmith Chemical Co., Louisville, Ky., which manufactures an antimalarial tonic distributed throughout the Southern States of this country and throughout Latin America, has opened distribution offices at 220 Broadway, New York, under the direction of John T. Stebbe, who recently retired from McKesson & Robbins. The company is headed by W. B. McFerron.

Hardt Joins Hoffmann-LaRoche

Robert A. Hardt, formerly director of advertising and sales promotion of E. R. Squibb & Sons, has joined Hoffmann-La Roche, Inc., as promotional director.

Dow Chemical Expansion

The Dow Chemical Co., has authorized new plants and additions costing an estimated $40,000,000, for construction over the next three or four years.

The contemplated construction will supplement a considerable amount of expansion during the war years. Some $44,000,000, were expended by Dow Chemical during the war for emergency war facilities.

At the same time the company revealed its postwar employment was not far from its wartime peak level. On May 31 of 1946, employment was 12,362.

Hornney to Represent A-B-C

Hornney & Co., 420 Lexington Ave., New York, has been appointed eastern sales representative for the A-B-C Packaging Machine Corp., Quincy, Ill., and A. H. Ross & Co., Covington, Ken.

A. G. HORNNEY

Weatherby Joins SSC&B

T. Newton Weatherby, formerly treasurer and vice-president in charge of sales, advertising and production of the Emerson Drug Co., has joined Sullivan, Stauffer, Colwell & Bayles, Inc., as treasurer and general manager.

Mr. Weatherby will be in charge of all business and financial aspects of the agency's operation as well as serving as special consultant for clients on marketing and sales problems.

Zonite Products Corp., has started work on the $200,000 addition to its New Brunswick plant. Shown here is the artists conception of the plant as it will appear. The new building will house shipping, advertising and package departments as well as a new cafeteria and recreation room.

Seaforth Wins Father's Day Award

Seaforth Toiletries won the first prize in the National Father's Day advertising contest, for the best Father's Day advertisement published this year. The award was made by an independent group of magazine executives who acted as judges, the National Father's Day Council played no part in the selection of the winners. The Seaforth campaign was the largest in the history of the company. Benjamin M. Hines is the advertising manager of Seaforth Toiletries.

Ludwig Scherk

Ludwig Scherk, sixty-six, founder and president of the Ludwig Scherk Inc., perfume manufacturers, with offices in Brooklyn, London and Paris, died August 4 in London after an emergency appendectomy.

He was born in Germany and established a retail perfume business in Berlin which developed into a manufacturing concern. He moved to London after the Nazis came into power and set up his business there.

Surviving are his wife, Anastasia, two sons of a former marriage, Walter and Fritz Scherk, a brother and a sister. His nephew, William Dean, president of the Scherk Corp., the company's sales organization, succeeds his uncle as president of the concern.

Dr. V. C. Fritz

Dr. V. C. Fritz, chief of research for the George H. Lee Co., manfuacturer of medicinal preparations, Omaha, Neb., is dead, at the age of fifty-eight years.

Sidney Matz

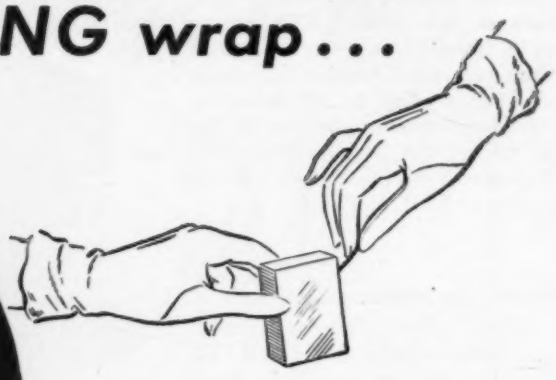
Sidney Matz, vice-president and director of Ex-Lax, Inc., Brooklyn, N. Y., was killed while flying his plane on the Pacific coast.

Mr. Matz was also president of Ex-Lax. Ltd., England, secretary of Ex-Lax, Ltd., Canada, and president of Jests, Inc., Brooklyn. For the past twenty-five years he had been active in the management of these companies and was an important factor in the direction of their advertising, merchandising and marketing.

A graduate of Harvard University, he received his degree in 1921 and Master's degree in 1922.

Mr. Matz is survived by his father and mother and two sisters.

There's a real SALES ADVANTAGE in an EASY-OPENING wrap...



You know how exasperating a hard-to-open package can be. It's one of those little annoyances that can have a BIG effect on sales... And yet drugs, cosmetics, foods, etc. require a tight, firmly sealed wrap for complete product protection, as well as for attractive appearance.

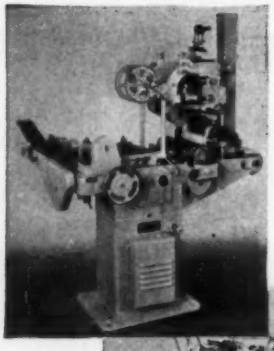
Our machines supply the answer to this problem by incorporating an easy-opening tape in the wrapper. A slight tug of the projecting end of the tape neatly opens the tightly sealed wrapper.

This type of wrap has proved so welcome a convenience to the consumer that more and more manufacturers are adopting it. It's something to consider if you are seeking ways in which to give your package the edge on competition.

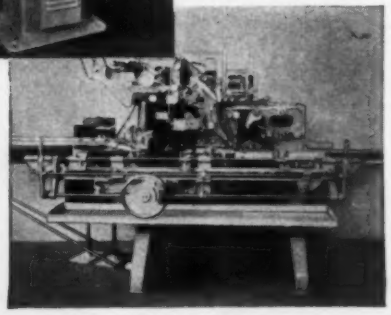
In many cases the wrap can be so designed that it will remain on the package after being opened by the tape. A cigarette package is an example. Also the Troll package illustrated here. In this case the laminated foil wrapper is sealed by strips of melted paraffin printed on the carton in the wrapping process.

We'll be glad to show you how an easy-opening tape could be added to your wrapping if you will send us a few samples of your package. We may also be able to suggest other ways of improving its sales appeal—for in serving package goods manufacturers for over 30 years we have gained wide experience in developing packaging innovations.

Why not avail yourself of our suggestions?



MODEL CAn-2
Widely used for high-speed wrapping of small size packages in cellophane with easy-opening tape.



MODEL CA-2
Wraps such items as tape bandage, headache powders, etc. with easy-opening tape.

PACKAGE MACHINERY COMPANY
Springfield 7, Massachusetts

30 Church St., New York 7 • 111 W. Washington St., Chicago 2
101 W. Prospect Ave., Cleveland 15 • 849 Marietta St., N. W., Atlanta 3
443 S. San Pedro St., Los Angeles 13 • 320 Market St., San Francisco 11
18 Dickens Ave., Toronto 8

PACKAGE MACHINERY COMPANY

Over a Quarter Billion Packages per day are wrapped on our Machines

Production Forum

By Francis Chilson

Industrial Consultant

Management's Responsibility

As I grow older and more experienced with many different types of firm, I am becoming increasingly impressed with management's moral responsibility in perpetuating itself, and the organizations which have grown and prospered under their direction. You might think that this course of action would be automatic, and instinctive. But it isn't. Such is the pride of ownership that I find many organizations, which are managed by the people who own all or a major interest in them, failing not only to bring new blood into the organization, but also frankly allowing the organization to go dead on the vine. While it is true that a management group, which has built a successful enterprise, may take great pride in owning it, they nevertheless owe a moral responsibility to their employees to see that the organization is perpetuated as a successful enterprise. This they very frequently do not do. Managements grow old, and because they own the organization, they simply don't give a damn. They seem to feel that they, and they alone were entirely responsible not only for creating the organization, but for building it up and developing it. To a large extent this is true. But it is also true that no man can do anything alone and unaided. Even though the individual contribution of employees is minor, and even though employees fail to remain, in some cases, more than a few years within a particular organization, it is a moral responsibility of management to make sure that the jobs which have been created under the direction of the present generation shall be perpetuated so that when they themselves are no longer able to remain in harness, the organization will go on as a successful and healthy entity.

I have been in many organizations where the younger executives were discouraged and ready to quit, because as they express it, "the management has made its pile; it has grown old now, and it donesn't give a damn what happens in the future. Therefore, you can't make them do anything new, they just want to take it easy and to hell with the rest of us."

Such an attitude on the part of management is not by any means uncommon. It is definitely inmoral. Even though an individual owns the entire organization which he created with his own energy, brains, and money, he still has a moral responsibility of passing that organization along to the people who worked with him and whose livelihoods are derived from the organization which they helped to operate.

Pallet Handling

I wish to present here a letter from my friend, John I. Thompson, regarding an article I had on pallet handling, a few months ago. At one time John and I worked together, more recently he has become a friendly competitor. I am presenting John's argument as is, and my rebuttal:

Dear Frank:

I read with great interest your article on warehousing in the April issue of Drug and Cosmetic Industry, and the additional comments upon it in the May issue. I am in general agreement with your conclusions.

There is, however, some doubt in my mind that your readers might be misled. Unlike you usually, I think you have not fairly established the premise in this case. Because of this, I am going to present my views.

I have read a lot about the Army and Navy use of pallets. It so happens I had something to do with the Navy's operations. Economy never entered into the considerations. By that, I mean, specifically, the cost of growing a tree and that sort of thing. The fine young officers presenting materials handling articles have concerned themselves only with different forms of palletization, not with different ways materials should be handled to obtain the least cost per unit. In our actual work with this subject, we have considered palletizing as one form, a *good* one, but not always applicable in the interest of greatest economy.

When you write, for instance, about multi-story versus one-story buildings, you fairly indicate circumstances supporting the former while extolling the latter as generally best. In your dissertation, you failed to do this—and frankly, having known you for almost a

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A Quarter Century of development and research in the application of Filtration in practically every processing industry has contributed many features which make the *"Sealed-Disc"* Filter outstanding.

Thousands of these Filters are being used throughout industry on a wide range of tank capacities and liquid viscosities with speed and efficiency. That's why we suggest that you investigate the *"Sealed-Disc" Filter first.*

Notice how easily internal parts can be removed for cleaning. All liquid touching parts can be supplied made of Stainless Steel, Monel Metal, Bronze, etc.

NOTE THESE 4 FEATURES

1. Completely enclosed, air-tight unit, eliminating loss through leakage or even by evaporation.
2. Exceptionally small space requirement. For example, a 600 gals. per hour filter complete with electric pump requires only a 9″ x 20″ floor space—a 2,000 gals. per hour machine requires only 12″ x 24″ of floor space.
3. Filter discs easily changed when clogged with dirt or when products handled are changed. A very few minutes does the job including washing and cleaning the filter itself.
4. Sizes, with or without pumps, range from 1 g.p.m. to thousands of gallons per hour for batch or continuous work.

We invite you to use our Laboratory facilities, send complete details of your filtration problem to us. Why not write today, there's no obligation.

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108 CASS STREET MILLDALE, CONNECTICUT

OUR NEWLY ENLARGED FACTORY AND FOUNDRY

decade and respecting you more than any other man in the field of consultation on plant operations, I was surprised.

For instance, isn't there a level of use below which, at a cost of about twenty cents a square foot which pallets now cost, palletized storage is not economical? Say, if it even costs two mills to place a case and the same to remove it, the cases on an average pallet would cost about twenty-four cents handled in bulk stacking. The pallet investment, per square foot of floor, three high, would be sixty cents. The cost into and from bulk stock of the same cases might be as little as four and one-quarter cents. Where packing is seasonal, this item, on a use of one a year is only one-fourteenth of the investment in pallets, should *everything* be palletized? Because of this, we have not always recommended 100% palletization, but, more frequently, partial palletization, to a level where the pallets, used more repetitively *as machines*, multiply the unit savings to a point of profit, bulk stack provision being all we accord the remainder of the storage.

Also, how about the multi-story structure? There are some additional costs in considering them for palletized storage over those occurring in single-story layouts.

Also, I did not note you considered *loading* the pallet originally. This factor is needed in a fair comparison with conveyors, where the latter can be continuous, holding proper accumulation, from line to warehouse to shipping dock. There may be a proportion of goods go directly to the shipping dock over this "line," which gives the conveyor an added advantage.

Actually, Frank, I do believe a materials handling system must be devised to fit each job, whether it be pallets, skids-and-hand-trucks, or conveyors, or combinations of these. We have a client with six plants. We have just set up his materials handling in all of these. One has the skid and hand truck method exclusively. One has conveyors. One has fork lifts and pallets. Two have a conveyor-pallet combination, and the last a conveyor, pallet, skid and handtruck combination. No two plants are alike physically or in volume of output. What we arrived at were the methods which showed the greatest economy in each case, by individual study of each.

Do not think I am against palletization. I am, for instance, one of the most active campaigners in the effort to get the glass companies to make up strapped loads of cased empty glass that can be fork handled without pallets by them and by the receiver. (The solution of this would result in an important reduction in total actual cost of glass delivered on the production line in almost every case, I believe). I am trying to direct the building of new plants in which we are concerned with layouts where the pallet handling will prove most economical, even to careful study of each bordering case, just to make sure. It is so flexible that product and volume changes, making some other method designed for satisfactory original use impracticable when the changes occur, cannot materially effect the efficiency of palletizing handling.

When I started this, I did not intend being so voluble, but you have always been so swell in giving me constructive advice and guidance I want to completely express my position in this matter. Frankly, I thought one of your staff had written the April article, and hence did not pick up my pen until reading the May one.

My very best. As always,

Sincerely,

s/ John I. Thompson

My reply to the above letter was as follows:

Dear Jack:

I am grateful for your letter of June 4th, which I will use in an early issue of the Drug and Cosmetic Industry.

I appreciate your comments, but actually I don't think that we are at all apart in the main. In the first place, I have written Production Forum so long that when I write an article in it, I am very apt to fall into the habit of assuming that my readers have read all previous articles on a similar subject. Therefore, when you point out that my comments, in general, do not apply to a multi-story structure, I agree with you entirely. As a matter of fact, I have pointed out in previous articles that the most practical way to handle materials in multi-story structures, particularly when there are several of such structures involved in the same plant, is to use conveyors. That is what I did so successfully at Norwich.

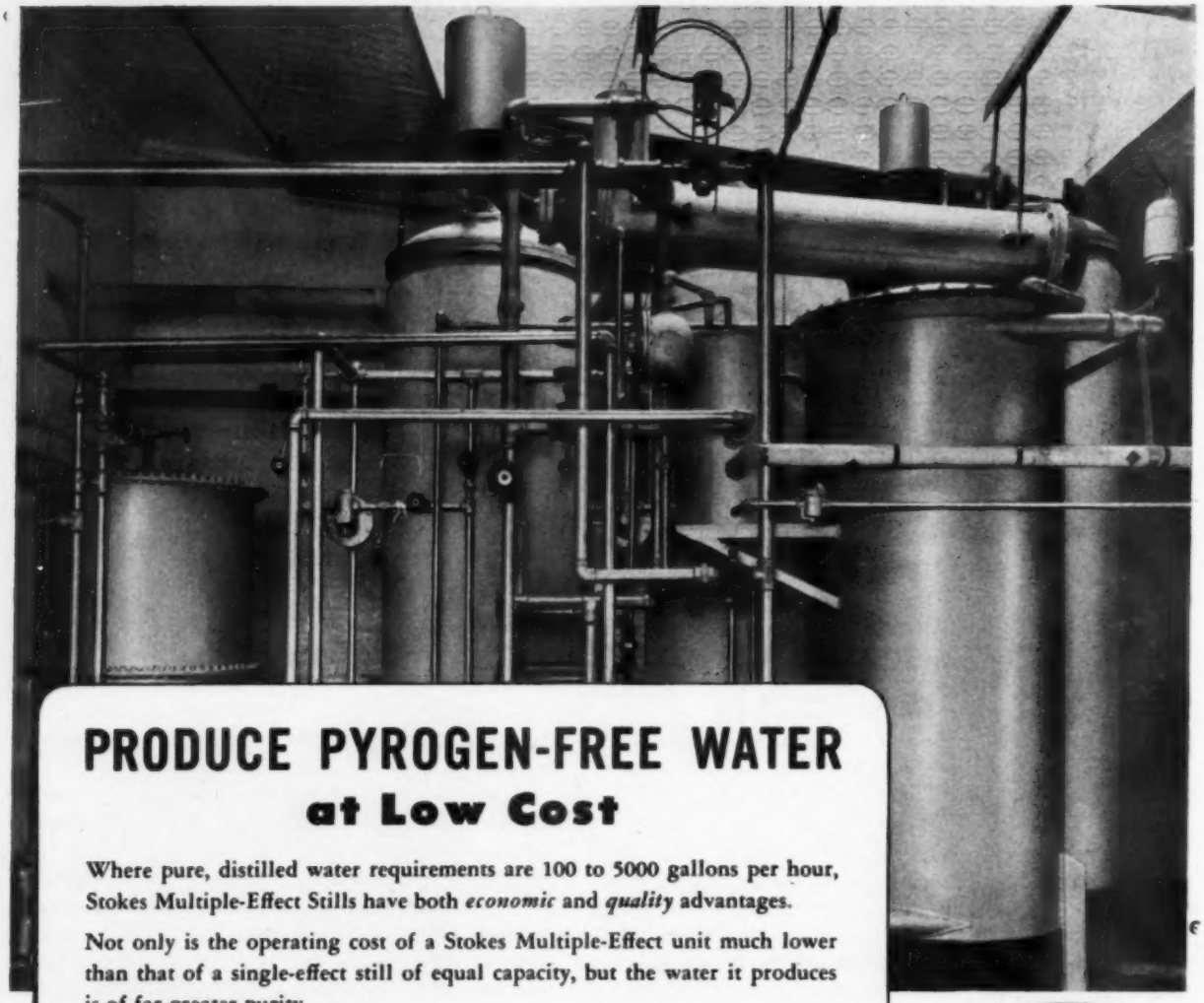
Likewise, I am in entire agreement with you when you say that the cost of the pallets must be taken into consideration. There is depreciation on pallets, and I took it into account in the drawing, a copy of which I am enclosing for your further perusal.

In selecting a material handling system, everything boils down, as I am fond of saying, into "common sense and simple arithmetic."

A pallet and fork truck system reaches a maximum of usefulness in a single story building in which head room will permit stacking pallets at least three high. I have used fork trucks and pallets in a few multi-story structures which were modern and capable of sustaining the weight of the truck, and which had better than average head room.

I am in agreement with you that where an industry is seasonal, as is the case in the food field, and where volumes of individual products are very great, that it is undoubtedly cheaper to use a conveyor and make very large, solid stacks. I am fully aware of the fact that even in some single story applications, you cannot use a pallet system entirely. It all depends on the variety and nature of the products manufactured. As you well know, especially in the cosmetic industry, some packaging materials are so fragile, as for instance, body powder boxes, that they may not sustain their own weight when stacked two or three pallets high. Likewise, in the same industry, certain products will be purchased in such small quantities that a single shipment wouldn't even constitute a pallet load. In this industry, and pretty generally in the drug industry, there are a lot of operations where, because of the nature of the

Stokes water stills



PRODUCE PYROGEN-FREE WATER
at Low Cost

Where pure, distilled water requirements are 100 to 5000 gallons per hour, Stokes Multiple-Effect Stills have both *economic* and *quality* advantages.

Not only is the operating cost of a Stokes Multiple-Effect unit much lower than that of a single-effect still of equal capacity, but the water it produces is of far greater purity.

Stokes pioneered the development of this type of equipment more than 25 years ago . . . is today engineering and building water stills to meet all requirements.

In the production of pyrogen-free distillate for use in saline, glucose and other intravenous solutions and for restoring desiccated blood plasma and many other purposes, Stokes Stills are widely used.

A complete line of laboratory stills is also available.

F. J. STOKES MACHINE CO. • 5932 Tabor Rd., Philadelphia 20, Pa.

Write for Catalog No. 41-S. Describes Multiple-Effect and Laboratory Stills for all purposes.

F.J.Stokes PROCESSING EQUIPMENT FJS Est. 1895

material, it is impossible to use, at one time, a pallet load of materials. Caps, for instance. So, in actual practice—and I suppose I should have brought this point out—I usually divide up a palletized area into three sections. There is the main pallet area containing solid pallet loads of materials that will stand stacking, then there is the broken pallet area in which pallets withdrawn from stock and partially used are kept. In this case, unless the pallets are racked, head room is lost as is the case in connection with skids and lift trucks. Likewise, I usually have some shelving tucked away in corners on which individual cases or remnants of various kinds of material can be stacked.

As you say, no system is perfect and applicable in all cases. The very first thing that determines what type of material handling system to use is the location of the plant with reference to rail facilities; the method of handling and receiving incoming materials; the nature of the structure of the building, and the nature of the materials themselves. Finally, account must also be taken of the overall nature of the business as to whether it is seasonal or not.

When a great variety of materials must be handled in a great variety of sizes as, for instance in the drug trade where you will encounter barrels, kegs, drums, boxes, bags, bales, and bundles, a conveyor system is not generally applicable. It can be used only for handling boxes within a limited range of widths, unless of course, belts are used throughout, and in the large application, as you know, this isn't practical.

A skid and lift truck system is just as flexible in handling a variety of materials, but you can't stack skids. What usually happens, as a matter of fact, in the average plant handling a variety of materials, an opportunity will arise to use all three systems to some extent. And I have done so on a number of occasions. What I am after now is to get the people in the trade who are contemplating the erection of new buildings, to build for pallets as the principal and most flexible system of handling materials that has been devised as yet. Conveyor systems confine their best application in cases where you can carry material out of a freight car and pick up the finished cased product on the same system and carry it into another freight car. In the drug and cosmetic industry there are very few or no instances that I know of where this kind of operation exists. There are a few cases, like Johnson and Johnson, where handling Modess, the packaged, cased products proceed straight from the case sealers into box cars. In which case, obviously a conveyor system is better than anything else. On the whole, I have found nothing which from the standpoint of labor saving, utilization of space, and economy in equipment investment, can remotely touch the pallet handling system. I did not, as you have assumed, eliminate the labor of stacking on pallets. My study is based on the fact that one man with a fork truck can do his own stacking. I realize, of course, that where fork trucks are used, it is customary to put one or two men in a box car to keep the pallets loaded, so that the driver of the fork truck has nothing to do but to run back and forth and do the transporting and stacking. In such instances, as you well know, it doesn't take long to empty a box car. However, I'll stand on the one, two, three ratio insofar as labor is concerned.

I appreciate your comments, and some day soon I hope to have a chance to get together over a drink, and argue the matter out.

Cordially yours,
s/ Francis Chilson

Misprint

"We suggest that old directors be disposed of as salvage paper."—From the South Bend, *Indiana Tribune.* To this, the *New Yorker* adds, "Excellent!"

The following information is supplied by manufacturers of the equipment described and claims made below by these manufacturers are passed along for what they are worth. Presentation of such notice in this department is not to be taken as endorsement of the claims or of the equipment.

Packaging Dry Products

An improved line of automatic and semi-automatic machines for weighing and filling dry products into containers has been announced by the Triangle Package Machinery Company, 906 N. Spaulding Avenue, Chicago 51. Known as Triangle Elec-Tri-Pak Vibratory Feed Weighers, these machines incorporate many improvements on the company's earlier Elec-Tri-Pak models, providing 25% to 50% faster packaging and greater accuracies. Typical products packaged on this equipment include: beans, peas, rice, crackers, cookies, candies, coffee, marshmallows, potato chips, cut macaroni products, dried fruits, grocery staples, pretzels, cranberries, etc.

The operation of the machines is unique. They are built with one or more weighing sections, depending upon production required. Material to be packaged is fed onto two parallel electrically vibrated feed trays in each section. One tray is for bulk feed, the other narrower one for finishing feed. When weighing starts both trays feed simultaneously into a power-rotated weighing receptacle which is connected to a balance beam scale. As the load approaches the predetermined weight, the bulk feed stops and the finishing feed brings the load to exact weight. The power-rotated weighing receptacle, a new feature, instantly discharges into the container providing faster, more positive operation.

The speed of the feeding tray is regulated by dials on top of the machine. These are factory set within limits to prevent the operator from speeding up the machine at the expense of accuracy. Some models will weigh from as little as ¾ oz. up to 8 oz. Others range from 1 oz. to 1 lb. and 4 oz. to 5 lb. This permits handling different products on the same machine. Various weights are easily set on the scale and a new precision Acro-Meter adjustment control is located on the front of the machine for making minor weight variations to

assure greatest accuracy. These adjustments can be made while the weigher is in operation.

The accuracies obtainable with Elec-Tri-Pak Weighers are illustrated by a typical guarantee on cheese crackers, three of which weigh ⅛ oz. The guarantee on 2¼ oz. packages of this product, subject to operating conditions, is that 85% of the packages will be within 3/16 oz. plus or minus and 15% within ¼ oz. plus or minus. Production on a 4-section machine is 82 packages per minute.

Another new feature of the Improved Elec-Tri-Pak weighers is known as Visual Weighing. This is an automatic light signal system which indicates the sequence of weighing operations and serves as a warning in the event of irregularities that might influence weighing accuracies. When the bulk and finishing feeds are operating, an amber and red light are lit. When bulk feed stops, the amber light goes out. When the finish feed stops, the red light goes out and a green light comes on, indicating accurate weight has been reached. As soon as the weighed load has been discharged, the green light goes out and the sequence repeats.

Literature illustrating this equipment can be secured from the manufacturer.

Filter Media

The Scientific Equipment Division of the Sales Corporation of America, Erie Avenue and D Street, Philadelphia, announces the availability of a complete 32-page catalog on its expanding line of Micro-Porous Porcelain Filter Media. This is the first time that such complete information on the media, and their incorporation into a variety of shapes and sizes, has been assembled under one cover.

Complete with illustrations, porosity charts, flow rate tables, and suggested applications, the catalog—Micro-Porous-Porcelain, 1946—also includes fill price schedules.

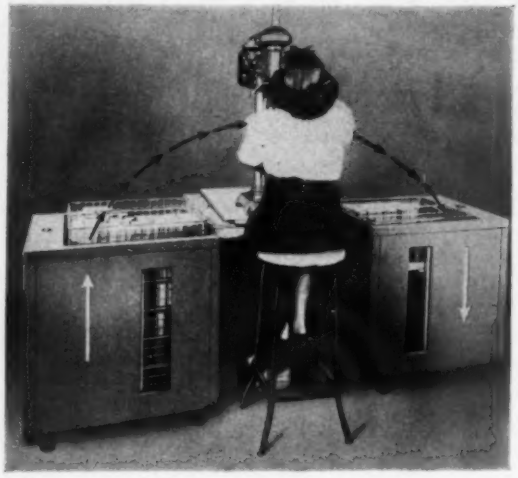
Well known in the pharmaceutical, bacteriological, and chemical fields, Micro-Porous-Porcelain is here presented in such a manner that will materially aid in its application to laboratory and production work in other fields—such as, food, textile, petroleum, etc.

Self Leveling Tray Holder

A three-in-one unit that combines automatic material handling with storage and transporting is now being manufactured by American Machine and Foundry Company, New York. Method Engineers and Production Men will be interested in this new self-leveling material handling system which is used in modern plants for machine operations, progressive assembly, storage and transporting of materials.

AMF Automatic Material Racks speed production. They are engineered to do away with the psychological slow down, physical back strain and accident factors involved in manual lifting of loaded tote boxes or in lifting materials to working levels. The automatic, spring-powered racks hold a visible bank of material and bring each piece to the operator's hand-level as soon as the preceding piece has been removed. Production is speeded up because the same working level is constantly maintained and flow of parts or material is continuously timed to the worker's individual capacity.

Reloading is accomplished by simply placing material on the platform where it automatically finds its proper level. Activated by self-contained springs, the rack requires no outside power source and is smooth in action, noiseless and trouble-free.



Parts may be placed in tote boxes or the material may be placed directly on the platform.

The units are designed to handle any weight. Load changes can be made by merely unhooking one end of the springs. Convenient door makes the springs easily accessible. No tools are needed. The units, mounted on ball bearing casters, can easily be moved from one department to another. The filled rack can be used as a storage unit

Information on AMF Automatic Material Racks can be obtained by writing the Lowerator Division of American Machine and Foundry Company, New York 17, New York.

Pharmaceutical Slide Rules

A pharmaceutical slide rule for use by chemists, pharmacists, and others in the drug and cosmetic industry, has been introduced by the Slyd-Rul Company, 134-44 Sanford Avenue, Flushing, New York. This slide rule includes a total of 18 different commonly used conversions, such as metric conversions, volume conversions, temperature conversions, etc.

The slide rule is made of celluloid and is a handy little tool. Write to the company for prices.

Pressure Valves

The Aerotec Company of White Plains, New York has just designed a new pressure relief valve that maintains a pre-determined pressure by relieving any excessive pressures that may take place in fuel and hydraulic lines.

THE ROSS WAY IS THE NEW WAY

Part of Ross assembly line

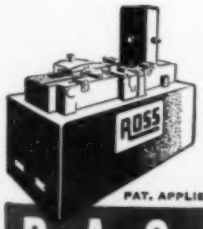
Part of Stockroom with standardized precision parts made to close tolerances.

STANDARDIZED *and* PRECISION BUILT

Ross Packaging Machinery is unique in the industry. Functional streamlining, engineered for precision adjustments, with all parts machined with fixtures and jigs insuring complete interchangeability.

Assembly line production using standard, precision built parts eliminates future replacement problems — eliminates prolonged 'downtime'. The result is the now famous Ross machine, self-oiled, speedy precision dial controls, versatile adjustability, high precision parts.

- PRECISION PARTS
- SELF-OILING
- DIAL CONTROL
- VERSATILE ADJUSTABILITY
- MASTER SPEEDRANGER



PAT. APPLIED FOR

A. H. ROSS *and Co.*

LUDLOW • KENTUCKY

A SUBSIDUARY OF ROCKWELL MFG. CO.

PACKAGING MACHINERY

Have you ever met these TROUBLE MAKERS?

"Max" caps on "Min" bottles, or vice versa, are little better than no caps at all. And rejects resulting from leakers and breathers are too costly for you to tolerate poorly fitting closures.

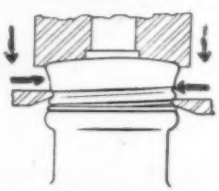
But you'll never meet up with these troubles if your products are protected with Alseco R-O Seals. They're automatically *tailor-made* as they're applied, *Rolled-On* to match the threads of each container.

Economical, rust-proof Alseco Aluminum R-O's hold plenty of customer appeal, too. They're easy to take off. Attractively lithographed in your own color and design, they dress up your package.

Write us about your sealing problems. Our 32 years of experience in providing the right answers is ready to help you find the best kind of closure for your products.

WHY ALSECO R-O SEALS ARE BETTER

1. Plain-skirted Alseco Seal is seated squarely on container. Under stationary top pressure, containerlip is embedded in cap liner evenly all around, effecting the seal.



2. While the seal is thus held under pressure, threads are Rolled-On to conform exactly with threads on container. Each seal is tailor-made, fits perfectly, seals tighter.

ALSECO

TAILOR-MADE BY ALCOA ALUMINUM

SEALS AND SEALING MACHINES

ALUMINUM SEAL COMPANY
SUBSIDIARY OF ALUMINUM COMPANY OF AMERICA

NEW KENSINGTON, PENNSYLVANIA
SALES OFFICES IN LEADING CITIES

The valve can easily be set to the desired pressure, at anytime, without interrupting its operation, by means of an outside adjusting screw. This eliminates the necessity for disconnecting either inlet or outlet and makes possible inspection of the entire valve assembly without disconnecting it from the main lines. These new Aerotec Pressure Relief Valves are available for pressures ranging from 5 pounds to 100 pounds per square inch in units having individual ranges of approximately 15 pounds per square inch.

Inlet and outlet are in a straight line. Over-all dimensions are: Length 2⅞", Width ⅞", Height 2", Weight 4 oz.

The Aerotec Company announces that these relief valves are now available for immediate delivery.

Dust Precipitation

Raytheon Manufacturing Company of Waltham, Massachusetts has just announced a new line of high-efficiency electronic dust precipitator equipment. Manufactured by the Industrial Electronics Division, the Raytheon Precipitator is available for immediate delivery.

Electronic precipitation brings an entirely new conception of efficiency to air cleaning. In fact, compared to mechanical filters, electronic precipitation is so efficient that an entirely new method of determining dirt-removing ability had to be developed. Known as the blackness test, United States Bureau of Standards test show a comparative efficiency for electronic precipitation of from 87% to 90% as compared to 10% to 20% efficiency obtainable from the best mechanical filter.

Raytheon's Precipitator removes ninety per cent *or more* of all air-borne dirt when installed into duct work systems of industrial air-circulating and air-conditioning installations. It removes even microscopic and submicroscopic particles which can cause as much difficulty as visible particles and may not be apparent in so-called "clean" air.

The Raytheon Precipitator is used to remove smoke, dust, *pollen*, oil mist and other contaminating particles commonly found in fresh and recirculating air systems. It thoroughly cleans air in metal, textile, precision instrument, food, pharmaceutical and other industries. The Precipitator cleans bacteria-laden dust and smoke from offices, stores, and hospitals, removing well-known health hazards and lowering cleaning and maintenance costs. Similar Raytheon equipment is used to clean recirculated air of force ventilated rotating machinery systems.

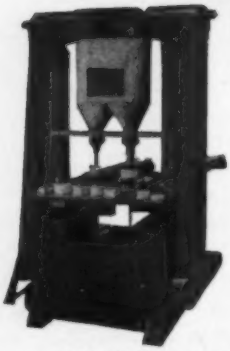
Briefly, the electrostatic method of dust precipitation means that all airborne particles are taken through an electrostatic field. These particles become charged and are precipitated on to collector plates, alternately charged with a high positive voltage. Where mechanical filters will permit most dirt to pass through, the electronic air cleaner will trap particles so small that it takes several million to cover the head of a pinpoint.

The Raytheon Precipitator consists of three principal parts—the dust-collector cell, the ionizer unit and the power supply. The ionizers are energized by the power pack with high-voltage direct current, creating a strong electrostatic field. As the air passes through this electrostatic field, every particle of foreign matter, regardless of size or make-up, receives a positive charge. Within the area of the cell itself (known as the collector) are parallel plates, separated by an air gap, alternately charged with the high voltage direct current.

The positively charged dust particles are attracted to the negative plate and become firmly attached to this collecting medium. The collector plates are periodically washed down to remove the dirt. On some Raytheon Precipitator units, washing equipment will be completely self-contained, whereas on the other models the collector plates are removed for cleaning. How often this must be done depends to a large extent on the amount of dirt in the air, but generally it is not oftener than once each month.

A typical Reytheon package unit is the 1200 CFM Precipitator, guaranteed to remove 90 % or more of all contaminating particles of dust, smoke, oil mist, lint or pollen from the air. This unit will clean, by recirculation, the air in a room approximately 35 x 35 x 12 feet and is suitable for any of the applications already listed. Since this cleaning is done without adding outside air, the load on existing heating or cooling units is appreciably reduced. This Raytheon Precipitator is supplied complete with ¼ H.P. motor blower, power pack, and electronic collector cell, enclosed in an attractive cabinet measuring 26" x 27" x 54". Only one external connection to a 115 volt, 60 cycle source is necessary to put the Raytheon 1200 CFM Precipitator package unit in operation. Power consumption is only 50 watts per hour or less than that consumed by the average reading bulb.

. . . they chose US

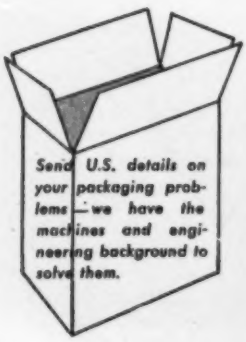


Model MH "BOND" Semi-Automatic VOLUME FILLER, WEIGHER OR PACKER

The manufacturers and packers of the products illustrated above came to ***US*** for dependable packaging equipment. The Model MH "Bond" filling machine was selected for several reasons. (1) The MH "Bond" is semi-automatic and therefore can be converted easily from one package size to another or (2) it can be used for filling bags, envelopes, cartons, jars or cans. (3) A single operator can fill up to 40 containers per minute. (4) Packed weight is controlled to a fraction of an ounce. (5) It is ideal for packing such products as ground spices, face powder, talcum, flour, soap powder, cocoa, etc.

The Model MH "Bond" is a twin-station machine. ***US*** also manufactures several other models of semi-automatic and automatic machines with one, two or four stations.

Regardless of your packaging machinery problems, it will pay to discuss them with ***US***, just as others have done for many years.



Send U.S. details on your packaging problems—we have the machines and engineering background to solve them.

US *Automatic Box Machinery Co. Inc.*

Owning and Operating

NATIONAL PACKAGING MACHINERY CO. & CARTONING MACHINERY CORP.

18 ARBORETUM ROAD, ROSLINDALE, BOSTON 31, MASS.

Branch Offices: NEW YORK CLEVELAND CHICAGO
LOS ANGELES (KRUDA EQUIPMENT & SUPPLY CO.)

Expendable Pallet

Techtmann Industries, 714 West Wisconsin Avenue, Milwaukee 1, Wisconsin, have developed an expendable pallet constructed as follows: The upper pallet surface consists of a double corrugated board top, suitably treated with a water resistant material which keeps it from absorbing moisture either from the atmosphere or from the load. This double corrugated board top is supported on round or square wooden blocks. It is claimed that 4,000 pound loads have been carried on what Techtmann Industries call the "X-P" Pallet, without failure. Each pallet weighs a little over 20 pounds.

Diffusion Pump

The H-10 Diffusion Pump is an all-metal 10″ diffusion pump with a capacity of 3,000 CFM from $2x10^{-3}$ mm. to 10^{-3} mm. of mercury. It operates against a forepressure of 450 microns and blanks off at 10^{-6} mm. of mercury. Outgassing and corrosion are minimized by the stainless steel casing. Extra-heavy construction, large capacity, and low cost should find many applications for this pump in industrial processing in the micron pressure range and below. Write for explanatory bulletin to National Research Corp., 100 Brookline Ave., Boston 15, Mass.

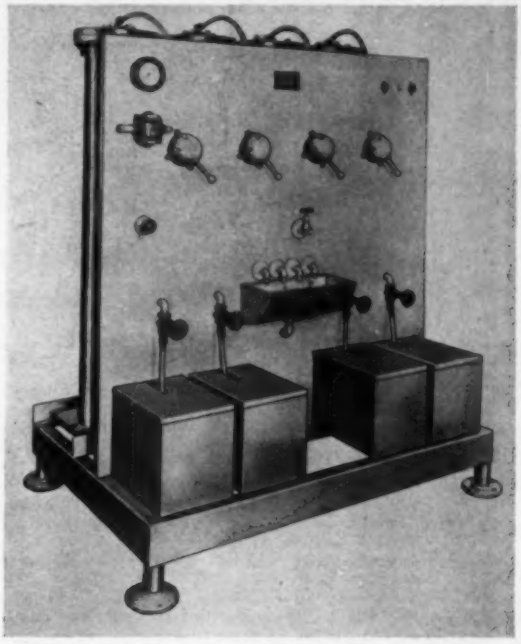
Purity Meter

A bulletin illustrating the new, low-cost Purity Meter and showing through a series of drawings the simplicity of operation. This instrument tests the purity of distilled or demineralized water by measuring the tiny current conducted by ionizable impurities in the water.

The result is read on a scale calibrated from 0 to 15 p. p. m. total impurities expressed as NaCl. An electric eye gives quick, positive indication of correct setting. A new conversion table of metal is attached to the Purity Meter which gives equivalent readings in ohms (resistance) and micro-ohms (conductance). Complete specifications and a list of accessories are included. Copies of bulletin, No. 113, are available upon request to the Barnstead Still and Sterilizer Company, Incorporated, Lanseville Terrace, Forest Hills, Boston 31, Massachusetts.

Water Demineralizers

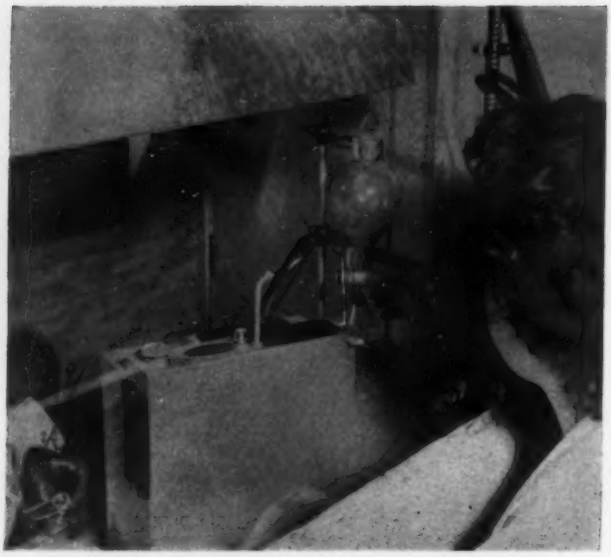
An illustrated bulletin describing the new Double-Action Type Water Demineralizer shows through



graphs and charts the effectiveness of this new method of ion-exchange purification. A complete explanation of how this 4 Bed Demineralizer lowers the cost of water purification and at the same time produces purer de-ionized water is given in the bulletin. The new demineralizer is available in six models ranging from 3 gallons to 1,000 gallons capacity per hour to fit the needs of laboratories and industrial plants. Also illustrated and briefly described are the practical laboratory Bantam (Renewable Cartridge Type) Demineralizer and the Purity Meter Model PM-2 for testing demineralized or distilled water. Copies of bulletin, No. 112, are available on request to the Barnstead Still and Sterilizer Company, Incorporated, Lanesville Terrace, Forrest Hills, Boston 31, Massachusetts.

Fly Killer

The Detjen Corporation, 303 West 42nd Street, New York 18, New York are purveyors of apparatus for killing flies. These fly killers come in the form of electric screens which may be fitted into windows or screen doors, or they are available in the form of traps. The screens are charged so that when insects alight on them they instantly are killed.



EXACT WEIGHT Shadograph filling and weighing Penicillin into vials under aseptic conditions in the Eli Lilly and Company plant, Indianapolis, U.S.A.

Filling and Weighing Penicillin in Volume Production . . .

When Penicillin reached volume production it became necessary to apply volume packaging methods to this drug. The requirements were(1) extreme accuracy in weights (2)speed of operation (3)packaging under aseptic conditions. These are exacting specifications of course but they have been met with the new EXACT WEIGHT Shadograph (illustrated). The unit above is enclosed in a glass case and operators work with gloved hands through apertures in the case to the sensitivity of 1 mg. This is but one of many uses EXACT WEIGHT Scales have been put to in the drug and cosmetic fields. We invite you to submit your packaging problem.

Model UAB 9051 Shadograph . . . a new EXACT WEIGHT Scale for Penic illin pac Dial reading made from mirror mounted above dial graduated 75 mg under and 25 mg overweight. Magnetic damper checks indicator to four beats for speed of operation. Current—110 volt, AC standard. Capacity—1,200 MG. . . . sensitivity 2 mg (under glass and protected from air currents 1 mg).

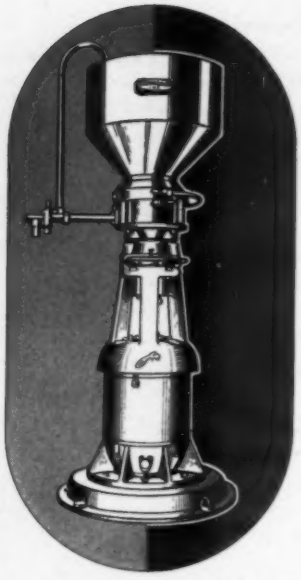
INDUSTRIAL PRECISION

Exact Weight Scales

THE EXACT WEIGHT SCALE COMPANY

950 West Fifth Avenue, Columbus 8, Ohio

Dept. AK, 783 Yonge St., Toronto, Canada



TWO PROCESSING MILLS IN ONE

1. *An Eppenbach High Speed Wet Grinding and Colloid Mill* will reduce the size of solid particles to microscopic dimensions and effect their instantaneous dispersion in fluid or plastic materials as consecutive operations in the same cycle.

2. Operation of the EPPENBACH COLLOID MILL requires neither training nor special skill—merely attention to simple directions. A calibrated dial registers adjustment of clearance between milling surfaces thus assuring higher uniformity of treatment.

EPPENBACH COLLOID MILLS are available in laboratory and production sizes. Capacities range from ½ to 3600 gallons per hour or higher. The principle of operation is the same for all sizes; therefore performance and capacity can be accurately predetermined by experiment with a laboratory unit.

EPPENBACH COLLOID MILLS can be adapted for pressure feed of viscous and semi-plastic materials. They are easy to dismantle for cleaning and sterilizing.

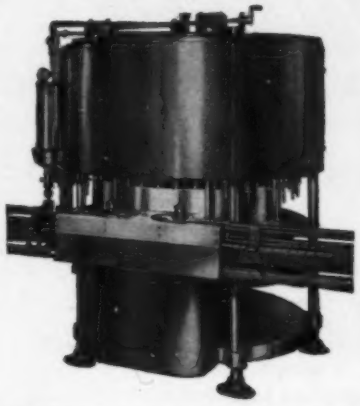
Write for Catalog No. 401 describing our equipment in detail.

EPPENBACH, Inc., 44-10 11th Street
Long Island City 1, N. Y.

EPPENBACH INC.

Processing Equipment for Over 30 Years

for **HANDLING LIQUIDS** and **SEMI-LIQUIDS**



U. S. ROTARY VACUUM FILLER

CAPACITY UP TO 130 CONTAINERS PER MINUTE

Fully Automatic U. S. Rotary Vacuum Fillers handle any free-flowing liquids, light or heavy, foamy or syrupy. Made in many sizes. Can be operated at variable speeds, with capacity up to 130 containers per minute. Some equipment is now available subject to rotation of orders. The earlier you anticipate your needs, the earlier we can serve you. Write for a copy of our Bottling Engineer Handbook. It is full of useful data to help you plan your bottling and packaging needs.

U. S. BOTTLERS
Machinery Co.
4011 N. ROCKWELL ST., CHICAGO

MANUFACTURERS OF
PUMPS
CAPPERS
FILTERS
CONVEYORS
WASHERS & DRYERS
WASHERS
CORKERS
FILLERS

SEAMLESS

ONE PIECE DIE DRAWN STAINLESS STEEL

6 REASONS WHY YOU SHOULD OWN HUBBERT SEAMLESS KETTLES . .

***METHOD** . . . Hubbert's methods are the best—not the quickest or cheapest, all kettle shells being properly heat-treated and hardened and specially processed to prevent corrosion.

EFFICIENCY . . . Hubbert Kettles are efficient—heat rapidly and evenly—due to proper steam distribution.

SEAMLESS . . . All Hubbert shells are seamless. Die Drawn from one piece of material. No welds to leak or corrode.

SANITARY . . . Hubbert Kettles are completely sanitary and easy to clean and keep clean. No cracks, holes or depressions where dirt may lodge. Hard and durable. Perfectly polished.

SAFETY . . . Hubbert Kettles are heavily constructed to withstand their rated working pressure *Plus*.

QUALITY . . . Only the finest of materials, engineering and workmanship go into Hubbert Kettles—resulting in low upkeep costs.

HUBBERT

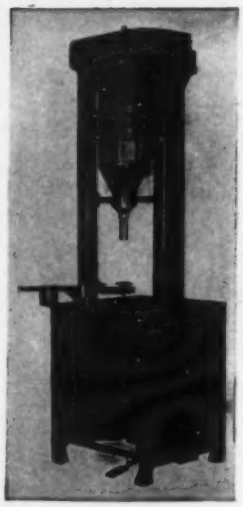
Manufacturers of Fine Kettles

1311 SOUTH PONCA STREET, BALTIMORE 24, MD.

*THE ONLY ONE OF ITS KIND IN THE WORLD . .

S&S

Universal FILLING MACHINES



...for filling practically any material but liquids

Incorporating many improvements, this new model of our old reliable Universal Filling Machine, is designed to do an even better job than its popular predecessor. The new machine features heavier construction where needed, increased drive efficiency and greater convenience for the operator.

This means added operation proficiency, steadier production and lower cost packaging for the user. . . for you. S&S Universal Fillers are supplied as one, two or four station machines; auger or centrifugal feed to accommodate material to be filled.

Packers of nationally known products have followed our recommendations for the best methods of filling and handling their packaging—with excellent results. Now is a good time to consult us about *your* packaging problem . . .without obligation, of course.

Although deliveries are uncertain, due to an accumulation of back orders, it will pay you to wait for an S&S machine, the *right* machine for the job.

STOKES & SMITH Co

4912 Summerdale Ave., Philadelphia 24, U. S. A.

FILLING • PACKAGING • WRAPPING MACHINES

Speeds to suit your needs—15-30-60-120 per minute

"Better machines for better packages"

Package POWDERS AND GRANULES with these labor-saving TRIANGLE MACHINES

powders

Triangle Model U-1
Automatic Feed Auger Packer

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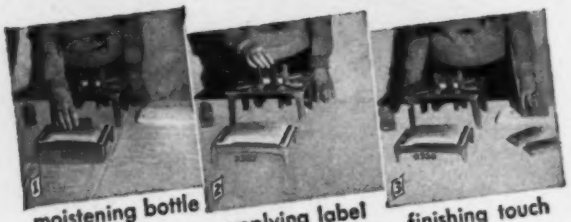

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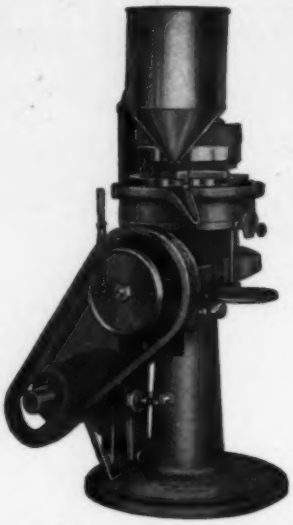

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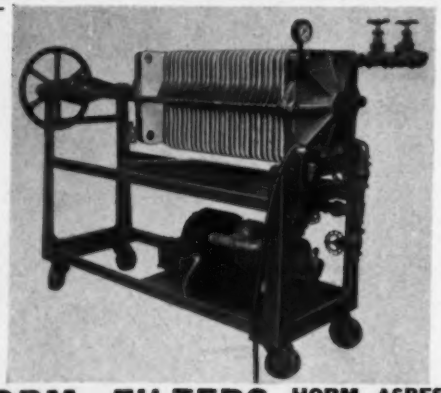

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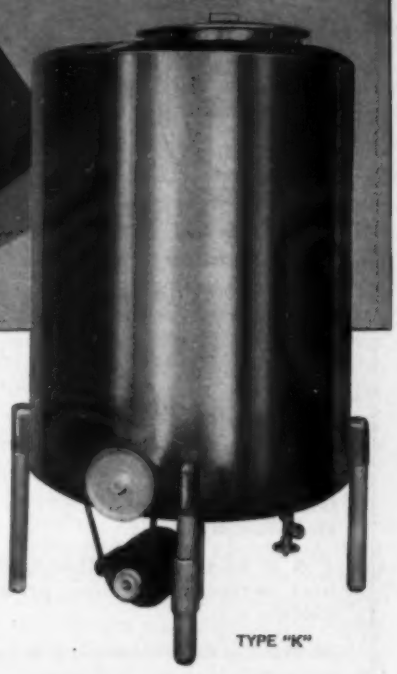

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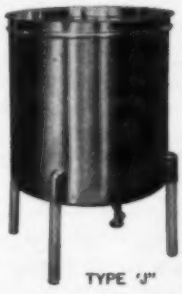

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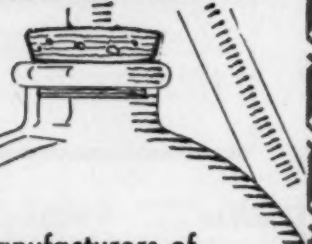

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Hackh's Chemical Dictionary, Third Ed., Revised and Edited by Julius Grant, M.Sc., Ph.D., 925 pp., Illus., The Blakiston Co., Phila., $8.50.

Hackh's Chemical Dictionary has become the standard one-volume reference book to all of modern chemistry, including the collateral vocabularies of physics, astrophysics, geology, mineralogy, botany, zoology, medicine, pharmacy and the pertinent jargon of industry, mining and commerce. The book contains more than 57,000 entries, mostly encyclopedia in charager, giving lucid definitions of each subject in the light of new research findings, and current acceptions. A feature of this dictionary is the numerous original tables of important data, diagrams, portraits, illustrations and other well delineated aids to a clear understanding of the subject. The various chain reactions are illustrated by formulas, and the Periodic Chain is fully tabulated, including complete scientific data down to element 94. The latest data on Atomic Disintegration is included together with brief, clear statements of the theories, laws and rules of chemistry, accurate descriptions of elements, compounds, drugs, minerals, vegetable and animal products, chemical apparatus, equipment and biographic sketches of scientists who have contributed to the development and progress of chemistry.

Physical Methods of Organic Chemistry, in two volumes, Edited by Arnold Weissberger, Eastman Kodak Co., Volume I, 736 pp., 276 Illus., 55 tables, $8.50; Volume II, 610 pp., 274 illus., 43 tables, $8.50, Interscience Publishers, New York.

In recent years, the science of physics has become increasingly important to the organic chemist. Physics has given much greater precision to the concepts of atoms, bonds, and structural formulas, and it has made possible the development of new and the improvement of older methods for the examination of chemical systems. With the increasing number and complexity of physical methods for the treatment of organic chemical problems there has resulted a specialization of research workers in the methods which they employ, and the selection of a research problem is frequently governed more by the physical method to be used then by the chemical nature of the problem. The chemist, in order to acquaint himself with a certain physical method, has in the past been compelled to search through periodicals and specialized books. The present work has been compiled with the hope of relieving him of much of his burden. It has been the object of the authors to provide a description of tested methods, the theoretical background for understanding and handling them, and the information necessary for a critical evaluation of the experimental results.

The American Pocket Medical Dictionary, Eighteenth Edition, Edited by W. A. Newman Dorland, A.M., M. D., Member of the Committee on Nomenclature and Classification of Diseases of the American Medical Association; 1061 pages, W. B. Saunders Co., Phila., Plain $2.00; Thumb Indexed $2.50.

This work contains the pronunciation and definition of all the principal terms used in medicine, surgery, dentistry, veterinary medicine, nursing, and kindred sciences; with over 60 extensive tables. Every department of medicine, surgery and nursing has been covered, with definitions of new words in biochemistry, physiology, pathology, mycology, endocrinology, vitaminology and tropical and parasitic diseases. There is also a wealth of terms of new synthetic drugs, including biologicals and antibiotics.

Organic Preparations, by Conrad Weygand, Professor at the University of Leipzig, translated and revised from the German text, 534 pp., Interscience Publishers, New York, $6.

The synthesis of organic compounds is still very much of an art. Although the organic chemist attempting to build a specific compound or to perform a specific modification of a given compound has at his disposal a general knowledge of properties and reactions in organic chemistry, he must rely on rule-of-thumb methods, based on his own experiences and those of numerous investigators before him. The aim of the present book is to coordinate these methods and to evaluate the many methods recommended for the formation and cleavage of all types of organic linkages. The organic chemist will, therefore, find in Weygand's treatise assistance in solving all types of problems encountered in synthetic work, as well as a selection of classical methods that will not only enable him to repeat previously published experiments but also to find new modifications in developmental work. The systematic organization of the book according to the type of linkages to be formed or severed and an exhaustive subject index make this a useful source for information on organic syntheses.

Devils, Drugs and Doctors, by Howard W. Haggard, M.D., 427 pp., Illus., Pocket Books, Inc., New York 25c.

Originally published in 1929 this book has run through 14 printings up to 1940 and now appears in the well-known Pocket Books edition at 25 cents. It is the story of the science of healing from medicine man to doctor and contains every word of the original edition. Divided into six parts it covers: "The Conquest Of Death At Birth," "The Story of Anesthesia," The "Progress of Surgery," "The Passing of Plague and Pestilence," "The Healing Art," "Medicine Through the Ages." Here is a real reading value for the money.

Ice Cream Diets, by Marion White, Editor of "The Woman," 58 pp., M. S. Mill Co., New York, $1.25.

This is a brand new idea for dieting—one which is actually pleasant to contemplate, for believe it or not, it is possible to eat ice cream two or three times a day and lose weight! Here are typical menus for reducing with ice cream as the basic food. For the woman who wants to lose ten pounds in a hurry there are menus for ten days. And there is a chapter included for the girl who wants to gain weight.

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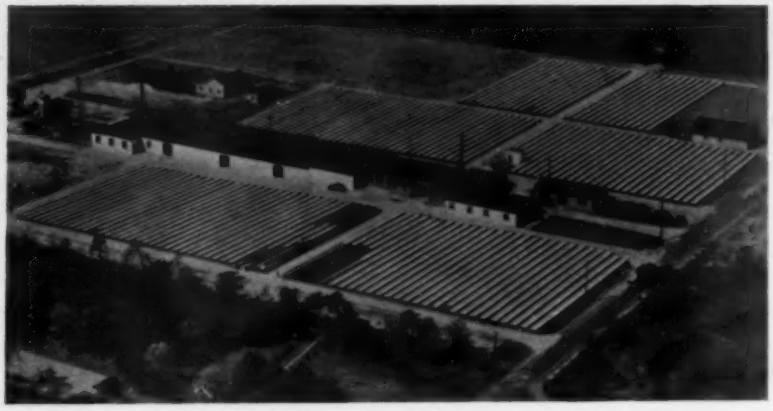

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Amphetamine vs Barbiturate Poisoning

Numerous drugs have been tried in the treatment of coma resulting from acute barbiturate poisoning, but variable results have followed their use. Several years ago, it was suggested that amphetamine (benzedrine) sulfate might be useful in counteracting barbiturate poisoning. An attempt has been made by A. W. Freireich and J. W. Landsberg (*J. A. M. A.* 131:661, 1946) to evaluate the drug's effectiveness on patients in coma from an overdose of barbiturates taken with suicidal intent. The patients were treated as admitted with no attempt at selection. To date 14 patients have been given treatment with intravenous injections of amphetamine sulfate; a preparation containing 10 mg. of amphetamine sulfate in 1 cc. of isotomic solution of sodium chloride being used. Of the patients so treated, 13 have recovered without any observable ill effects except for some headache. In the estimation of Freireich and Landsberg, the one patient who died had not received a sufficient quantity of amphetamine. They feel that experience with this small series of cases of poisoning with barbiturates is favorable enough to warrant further use of amphetamine sulfate for this type of therapy.

Protein Hydrolysate in Infective Hepatitis

The value of protein hydrolysate in the treatment of infective hepatites is indicated in the study made by R. Viswananthan (*Indian Med. Gaz.* 80:490, 1945, through *J.A.M.A.* 131:566, 1946). In his work, 27 patients were treated with the protein digest, while an equal number served as the controls. He concludes that protein hydrolysate has definitely a place in the treatment of infective hepatitis with toxic symtoms. Vomiting disappears and appetite is restored quickly. The liver becomes normal within a shorter period. The degree of jaundice is not appreciably affected in the majority of cases. The sedimentation rate comes down to normal in a shorter time. Better results are obtained in those treated early. He is inclined to believe that if the treatment is instituted in the preicteric or the early icteric stage the results will be more favorable.

Antipruritic Action of Theophylline Ethylenediamine

All practitioners are frequently confronted by patients with severe pruritic eruptions that fail to respond to the usual therapeutic agents. Unpleasant in itself, this severe itching may lead to more serious complications Hence the importance of the preliminary report by E. Epstein (*Arch Dermat. and Syphil.* 53:281, 1946) on the value of theophylline ethylenediamine for affording immediate relief of generalized and localized itching In his opinion the results are so dramatic as to warrant extensive research.

In his cases, theophylline ethylenediamine given intravenously by the syringe method in doses of 0.5 Gm. proved to be an effective antipruritic agent for various dermatoses. The relief occurred immediately and lasted for from thirty minutes to twelve hours. The results of intramuscular and gravity intravenous injection of the drug were less dramatic and less constant. However, there is a definite danger of death occurring in patients with impaired cardiac reserve who are given this drug intravenously. Therefore, further studies are being conducted to find a safer effective route of administration.

Penicillin and Sulfadiazine for Sinusitis

In treating suppurative sinusitis, A. S. Pugmire and D. Eberle (*Rocky Mt. Med. J.* 43:26,1946) used a mixture which contained 4 per cent of sulfadiazine and 20,000 units of penicillin per each gram of base. The base itself was a moderately thin, water-soluble ointment which was easily injected through the trocar used for ordinary antral lavage. Following ordinary lavage with isotonic solution of sodium chloride the mixture is instilled into the sinus and allowed to remain until the next irrigation, which is usually forty-eight to seventy-two hours later. This subsequent lavage showed a remarkable reduction in the amount of pus present, with little or none of the mixture remaining. It was necessary to repeat this procedure two or three times to obtain a pus free or 1 plus pus washing. In most cases the patient was clinically symptom free with only a slight clear postnasal drip present after a period of three to four weeks. Two or three subsequent lavages were done after the first clear washing was obtained to make certain that residual pus was not present. Five cases were selected at random, regardless of past history and treatment. All were pus free after one to five or six lavages, and there has been no recurrence.

Fluorine-Vitamin Tablet vs Dental Caries

L. P. Strean and J. P. Beaudet (*Dental Survey* 22:689, 1946) have reported the results of clinical trials with calcium fluoride, ascorbic acid and vitamin D in the inhibition of dental caries in children. Control tests showed that children between the ages of 8 and 16 years receiving no fluorine in their water or food may expect an average increase of 40 to 65 per cent in the incidence of dental caries. This was reduced to 27 per cent when one 3-mg. calcium fluoride tablet daily was taken, and to 24.7 per cent when vitamins C and D were combined with the fluoride. The incidence dropped to 10 per cent in a second series of tests. A synergistic action of vitamins C and D with fluorine is suggested to explain the decrease. The authors believe that fluorapatite may be adsorbed on dental enamel surface and that it is resistant to bacterial decomposition and lactic acid digestion. Combining fluoride with vitamins C and D in tablet form offers a means which controls the amount of fluorine ingested. The vitamin-fluoride tablet used in these studies contained 3 mg. of calcium fluoride, 30 mg. of ascorbic acid and 400 units of vitamin D as calciferol.

Studies with Pure Crystalline Amino Acids

In their studies of the value of amino acids in the production of plasma protein and nitrogen balance, S. C. Madden and G. H. Whipple (*Am. J. Med. Sci.* 211:149, 1946) used pure crystalline amino

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acids in various mixtures. The so-called ten essential amino acids in suitable amounts can be given by mouth, by vein, subcutaneously or intraperitoneally with equal success in maintaining nitrogen and weight equilibrium. These ten essential amino acids are threonine, valine, leucine, isoleucine, lysine, tryptophan, phenylalanine, methionine, histidine and arginine. Aminoacetic acid (glycine) is usually added to this mixture. By mouth the amino acids are utilized a little more completely than when given parenterally. Experiments give no evidence that the unnatural isomers of the amino acids are toxic, and some are probably used in the body. These amino acid mixtures can be given rapidly in 10 per cent solution parenterally and cause less clinical disturbance than any protein digests so far tested. Glutamic acid in digests or amino acid mixtures is not well tolerated by vein and may induce vomiting. The production of new plasma protein due to amino acids in general corresponds favorably with the response to high grade diet protein in equivalent amounts. The amino acid mixtures are well utilized by patients with chronic infection (colitis), gastrointestinal disturbances (partial obstruction) or cancer cachexia.

Alginic Acid as Hemostatic Agent

According to C. A. H. Smith (*Science* 103:634, 1946), alginic acid provides a new and effective hemostatic agent of the group classed as coagulation accelerators. Alginic acid, derived from seaweed, is prepared as a powder which, when applied to the bleeding point, combines with the blood calcium and immediately forms a coagulum that seals the wound. The styptic action is prompt, and new tissue is formed. Alginic acid has been used on a series of 100 cases of extraction and minor surgery of the mouth. In no case has there been untoward reaction and healing has been unusually prompt.

Radioactive Iodine for Hyperthyroidism

Roentgen therapy has been used for hyperthyroidism for many years and iodine has been employed as a useful aid in treating this condition for more than two decades. The possibility that the two measures could be combined to give a more effective, nonsurgical agent appears to be nearer realization as a result of the work done with radioactive iodine by E. M. Chapman and R. D. Evans (*J.A.M.A.* 13:186, 1946). They found that in hyperthyroidism, orally administered doses of radioactive iodine, carried in about 1 mg. or less of ordinary iodine, are concentrated largely in the thyroid gland. The beta rays from the radioactive iodine deliver within the thyroid an internal radiation which is physically similar to roentgen radiation. In their studies, covering nearly two years, 22 patients having hyperthyroidism were treated with large doses of radioactive iodine; no other form of therapy being given. Fourteen patients responded well to a single dose of radioactive iodine; 3 were given two doses and 5 were given three doses. Myxedema has followed this treatment in 5 patients. Two patients after treatment with this agent, though improved, still have mild hyperthyroidism. Patients who have not responded to other forms of treatment or have been sensitive to iodine or thiouracil have responded well to radioactive iodine. Ordinary iodine is not necessary with radioactive iodine. treatment. However, reactions which resemble X-ray sickness have been observed in 6 patients following large doses of the radioactive iodine. On the basis of their observations, Chapman and Evans believe that therapy with this agent can be added to the growing list of medical methods for controlling thyrotoxicosis.

Heparin Treatment for Venous Thrombosis

Knowledge acquired during the last eight years makes possible a very early diagnosis of incipient thrombosis. As soon as the diagnosis has been made, treatment should be instituted to prevent serious, sometimes fatal complications. The method of therapy introduced by G. Bauer (*J.A.M.A.* 131:196, 1946) consists in giving these patients an intensive heparin treatment. This plan of treatment was followed for more than five years; 209 cases of acute deep leg thrombosis were treated. There was no death from postoperative pulmonary embolism. Three fatal cases were recorded among the patients not operated on; 206 cases were cured. In these, fever, leg swelling and pain disappeared so rapidly that the patients were able to leave bed after, on an average, 4.7 days.

In comparison with patients treated in the old, conservative way, heparin treatment resulted in depressing the mortality to less than one-tenth and in reducing the time of staying in bed from the previously customary forty days to about five days. There seems to be every probability that heparin-treated patients will, as a rule, escape those troublesome after-effects, which regularly appear in conservatively treated thrombosis patients and consist in permanent swelling of the leg and, later on, brown induration and ulcers.

PABA in Scrub Typhus Treatment

Scrub typhus, or tsutsugamushi disease, is an acute infectious disease caused by a rickettsial organism. This has been one of the severest diseases encountered by troops in the Pacific and Asiatic theaters of war and it has an over all case fatality rate of from 5 to 7 per cent. Many drugs have been tried in this disease, but until now no effective therapeutic agent has been found.

That the picture is changing is indicated in the report of N. A. Tierney (*J.A.M.A.* 131:280, 1946) describing the beneficial effects of para-aminobenzoic acid (PABA) in this condition. Eighteen patients with tsutsugamushi disease were treated with large doses of para-aminobenzoic acid, and their clinical courses were compared to 16 alternate controls who received the standard treatment. The para-aminobenzoic acid was given orally as a powder partly neutralized by a sodium bicarbonate solution, which has a tendency to lessen gastric irritation. This was accomplished by mixing 10 cc. of a 5 per cent sodium bicarbonate solution with each gram of para-aminobenzoic acid powder.

The difference between the course of the disease in the para-aminobenzoic acid cases and the controls was striking. The patients who were given para-aminobenzoic acid had fewer days of fever, less severe symptoms and complicating conditions, a shorter period of convalescence and a lower case fatality rate. Hence it is concluded that para-aminobenzoic acid administered in the first week of disease is an effective therapeutic agent against tsutsugamushi disease or scrub thyphus.

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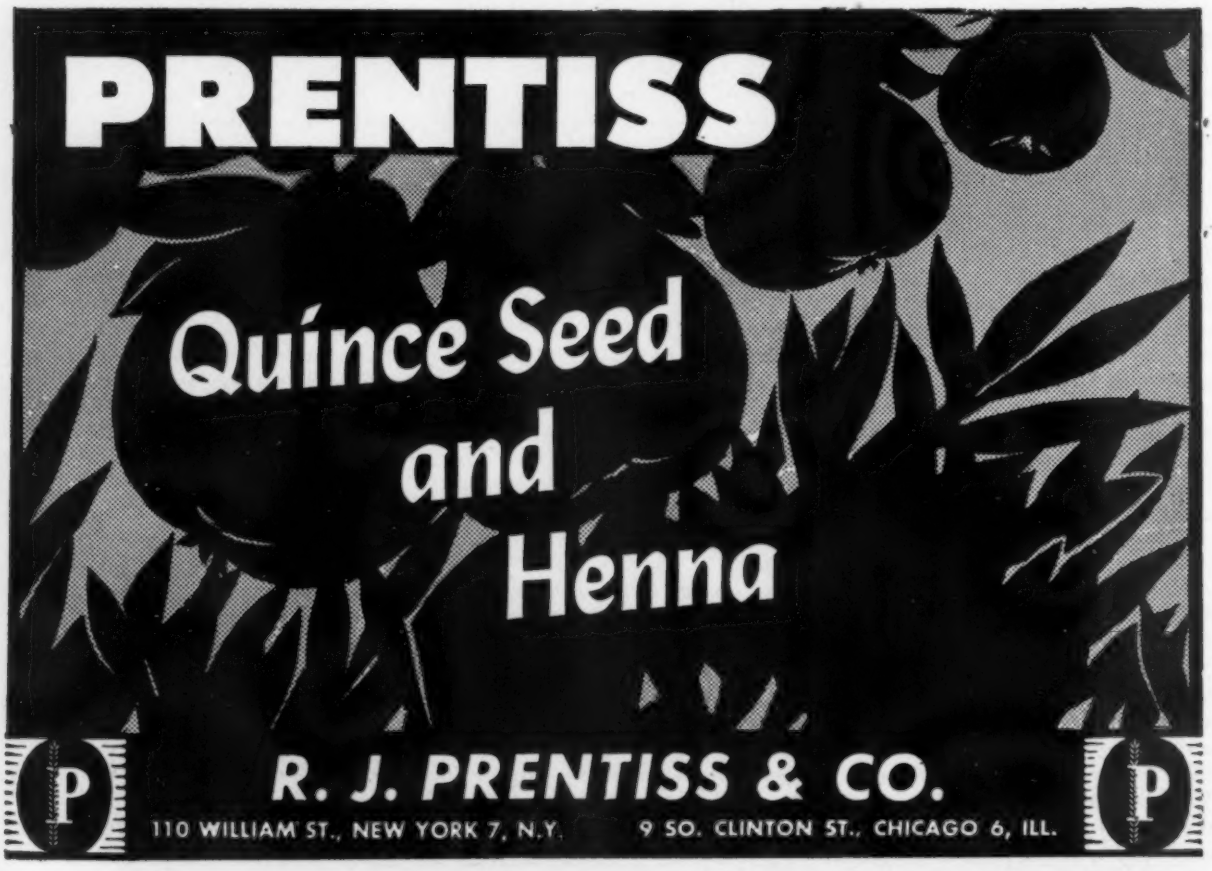

Compounder's Corner

Mascara Analysis

In another of his reports on the analysis of mascara, P. W. Jewel (*J. Assoc. Official Agr. Chem.* 29:32, 1946) states that fundamentally these products consist of a soap (usually triethanolamine stearate) modified as to consistency with oil and waxes, and color. Only a few brands still use sodium or potassium soaps. The oil is usually mineral oil, but may be castor or other vegetable oil. The waxes may be carnauba, candelilla, ozokerite, paraffin, or beeswax. The colors used are mostly bone black, ultramarine blue, titaminum dioxide, or iron oxide pigments. Organic dye lakes are prohibited by law and are not likely to be found; but suitable tests for organic dyes must be included in any scheme of analysis since it is the most serious adulteration likely to be encountered.

To determine fatty acids, oils and waxes, the sample is heated at 80 to 90°C. for 30 minutes with 100ml. of 10 per cent hydrochloric acid with rapid mechanical agitation, cooled to 3 to 5°C., and filtered. The residue is returned to the original beaker and the treatments is repeated with 100 ml. of 10 per cent hydrochloric acid, and then with distilled water. The residue is dried at 100°C. and weighed. The acid number of the oils, fatty acids and waxes is determined by dissolving a weighed sample of the extract in boiling absolute alcohol and titrating with 0.5 *N* sodium hydroxide with phenolphthalein as an indicator.

Consideration of methods for detecting arsenic are also included in this report.

Moisture Determination in Cosmetics

In studies on the determination of moisture in cosmetics, J. F. Weeks, Jr. (J. Assoc. Official Agr. Chem. 29:35, *1946) employed three laboratory-prepared vanishing creams and three laboratory-prepared cold creams, compounded according to conventional formulas and of known water content. These were subjected to drying in an oven at atmospheric pressure and at varying temperatures under an absolute pressure of less than 20 mm. of mercury. Xylene distillations were also performed on all samples. From these determinations it appears that vanishing creams of the stearic acid-glycerine-alkali type can be assayed for moisture with an accuracy of 0.1 to 0.2 per cent, if at automatic deduction of 0.5 per cent be made for the alcoholic perfume it usually contains. This determination is to be carried out by drying at 50°C. and less than 20 mm. pressure after removing the bulk of the water at a higher pressure. It also appears that moisture in emollient creams, free from mineral oil, can be determined at 100°C. and atmospheric pressure, with an accuracy of 0.05 to 0.1 per cent, after deducting for perfumes as above. However, cold creams containing mineral oil, and possibly paraffin, cannot be assayed for moisture by drying. Attempts to use xylene distillations proved difficult and cumbersome, so that other methods will have to be tried.*

Protection from Poison Ivy

The observations made and the data gathered by G. G. Novacovich (*U. S. Naval Med. Bull.* 46:811, 1946) have not only yielded valuable information on the nature of poison ivy or poison oak dermatitis, but also have provided a means of protection from the irritating resins. He reported that the various types of poison ivy are fundamentally the same and that the oleoresin in poison ivy, poison sumac, and Japanese lac trees is identical. It was also observed that hyposensitization to the ivy resin is best achieved by the use of large doses of oral antigens rather than by parentival admistration of the resins.

After testing a number of materials, Novacovich found that chlorinated lime inactivates or destroys the ivy oleoresins and protects the user against ivy dermatitis if used in ointment form prior to exposure. This protective ointment, which is itself non-irritating to the skin, is composed of 10 per cent chlorinated lime in the following base:

Cetyl alcohol	35.1
Stearyl alcohol	5.3
Ceresin	3.5
Castor oil	20.8
Mineral oil	21.9
Duponal WA pure	1.7
Sodium perborate	10.0
Boric acid	0.7

The 10 per cent chlorinated lime ointment offers protection which is not due to mechanical action, but is due to the destruction or inactivation of the ivy resin. To be most effective, the ointment should be applied to the skin before exposure. Inactivation of the oleoresin by chlorinated lime suggests the use of this resin for the decontamination of articles contaminated by ivy resin. Certain articles of clothing or gear could readily be washed or sprayed with a chlorinated lime solution. The chemical is inexpensive, relatively stable when dry, and easily prepared for use. Chlorinated lime solution was also used as a rinse on areas of the body usually involved by dermatites. The impression gained was that cases of poison dermatitis among those using the rinse were more mild and did not tend to spread as much as the ordinary cases.

Lotions for Prickly Heat

In a clinical and statistical study which destroys many old beliefs about prickly heat, M. B. Sulzberger and L. O. Emik (J. Investig. Dermatol. *7:53, 1946) point out that this condition is one of the most common skin diseases. Therapy of prickly heat is largely palliative and consists in the main of cooling keratolytic and drying tinctures, lotions and powders. In many cases, any procedure which produces superficial desquamation will lead to the termination of symptoms. Two local applications which have been found most useful in treating this condition are given. The first of them, to be dabbed on affected areas several times daily until desquamation sets in, consists of:*

Menthol	1.0 per cent
Glycerine	1.0 " "
Salicylic acid	4.0 " "
Alcohol, 95%, to make	100.00 " "

The second lotion, also to be dabbed on the affected areas several times daily, is made as follows:

Menthol	2.0
Camphor	2.0
Bismuth subnitrate	10.0
Zinc oxide	10.0
Alcohol	
Lime water, equal parts of each, to make	240.0

Stearic Acid Ointment Bases

P. Malangeau (*J. Pharm. Chim.*, through *Quart. J. Pharm. and Pharmacol*, 19:79, 1946) has found that although

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both diethyleneglycol monostearate and ethanolamine stearate serves a good emulsifying agents in the preparation of ointment bases, a mixture of 90 to 95 per cent. of the former and 10 to 5 per cent of the latter gives better results. A preparation, made by warming 25 Gm. of ethanolamine with 200 Gm. of water to 80°C. and melting 100 Gm. of stearic acid with 575 Gm. of water at the same temperature, mixing the two and stirring until cold and then incorporating 100 Gm. of the mixed emulsifying agent, has both the appearance and consistency of soft paraffin and can serve as the base of many of the common ointments. Water-soluble medicaments can be incorporated since the base will take a further 20 per cent of water. Glycerine, alcohol, soft paraffin, lanolin and lard can also be readily incorporated in this preparation, as well as ichthammol which is often troublesome. It is said that this preparation is also an economical substitute, as some 170 Gm. of stearic acid is equivalent to about 1,000 Gm. of fat.

Acacia and Tragacanth Emulsions

In a study of the preparation of pharmaceutical emulsion, only gum acacia and tragacanth were considered by K. Munzel (Pharm. Acta Helvet. *20:380, 1945*) *He found that the acacia is the actual emulsifier, forming a fi m around the oil globules, and the larger the amount of acacia used, the greater the dispersion attainable. However, the gum must be of good quality. A suitable test for quality is as follows: 5 Gm. of finely powdered gum is rubbed down in a mortar with 10 Gm. of liquid petrolatum; 7.5 Gm. of water is added and mixed with a rapid rotary movement of the pestle. If, within 45 seconds, no mucilage has formed and there is no emulsification, the gum is unsuitable. If satisfactory, the emulsion is worked for a further minute, diluted with 7.5 Gm. of water, and transferred to a beaker. After standing for twenty-four hours there should be no perceptible creaming and no separation of oil at the surface. The tragacanth in an emulsion serves to increase the viscosity and prevent creaming. The chief cause of failure in emulsions is poor quality of the tragacanth, and all samples should be tested for vicosity. In emulsions containing both gums, the dispersion increases with the proportion of acacia, but the viscosity does not necessarily increase with the tragacanth content, because acacia decreases the viscosity of tragacanth mucilage. It is therefore undesirable to increase the proportions of the two gums indiscriminately. A suitable proportion is to use equal weights of the two gums, each being about 2 per cent of the water phase. Thus, 1kg. of an emulsion with 40 per cent of oil should contain about 12 Gm. each of acacia and tragacanth, some adjustment being necessary according to the viscosity of the tragacanth. If an emulsion is too thick, it should not be diluted with water, but thinned by the addition of acacia, in powder. The viscosity of emulsions is increased by homogenization, owing rather to more effective hydration of the gums than to increase in dispersion. The amount of tragacanth may accordingly be reduced.*

Booklet on Sunscreening Agents

A 10-page booklet describing sunscreening agents, with charts of various tanning and sunburning rays, including formulas to meet the requirements of suitable suntan preparations, has been issued by Givaudan-Delawanna, Inc. Instructions for preparing the formulas are included. Copies of the booklet are available upon request to Givaudan-Delawanna, Inc., 330 West 42nd Street, New York 18, N. Y.

Preserving Eye Drops

For the preservation of collyria or eye drops, A. Mirimanoff and P. A. Cuttat (Pharm. Acta Helvetica *20:190, 1945*) *suggest the addition of 0.001 per cent of phenyl mercuri-borate. This is compatible with most of the chemicals commonly used, though chlorides and bromides, in sufficient concentration, may cause a turbidity due to the less soluble phenyl mercuri-halide. It is generally best to dissolve the medicament in water containing tge required amount of phenyl mercuriborate. If a definitely germicidal effect is required, the concentration should be increased to 0.01 per cent.*

Cotton Wax

Cotton fibers are coated with a thin layer of waxy organic material which is present to the extent of only a fraction of a per cent. This substance, called "cotton wax" has a consistency similar to that of beeswax, has a characteristic odor, and is dark greenish-brown in color. Numerous research workers have investigated the constituents of the wax, but their studies have been hampered by the small amounts available. This difficulty has been overcome in the studies reported by W. H. Tonn, Jr. and E. P. Schoch (*Ind. & Eng. Chem.* 38:413, 1946). The wax for this investigation was obtained as a by-product of a pilot plant operation in which 100-pound batches of Texas cotton fiber were extracted with hot benzene. The wax is present to the extent of 0.2 to 0.7 per cent of the weight of the fiber, so that approximately 25 pounds of wax were recovered from the 10 bales of cotton extracted in the pilot plant.

The physical constants determined on cotton wool by these workers include those customarily reported for waxes and are listed as follows:

Melting point, ° C	**68-71**
Specific gravity, 15/15° C	**0.959**
Saponification value, mg. KOH/gram	**70.6**
Acid value, mg. KOH/gram	**32.0**
Ester value, mg. KOH/gram	**38.6**
Acetyl value, mg. KOH/gram	**73.1**
Iodine number, grams I_2°/ 100 grams	**24.5**
Fatty acids, %	**25**
Unsaponifiables, %	**69**
Hehner value, %	**100**
Reichert-Meissl value, ml	**0**

Chemical analysis showed that cotton wax had the following composition:

Fatty acids		**25%**
Saturated	**24%**	
Unsaturated	**1**	
Unsaponifiable matter		**69**
Alcohols	**52**	
Sterols	**10**	
Hydrocarbons	**7**	
Inert matter		**6**
		100%

In their summary, Tonn and Schoch state that cotton wax is medium high melting, compared to other vegetable waxes. It differs from most commercial waxes in that it is not predominantly an ester, but contains smaller amounts of fatty acids and larger amounts of free alcohols as shown by high acetyl value and percentage unsaponifiables. The wax is not hard and brittle at room temperature but has a consistency comparable to that of beeswax; its dark color and obnoxious odor can be removed by decolorizing and bleaching agents. The mean molecular weight of the fatty acids portion indicates that the preponderance of acids present may be cerotic and melissic.

The wax blends well with other natural waxes and resins and has been formulated into a number of industrial products. On the basis of their obvervation, these workers feel that whenever requirements demand a wax of medium-high melting point, qualifications generally filled by a vegetable wax, cotton wax should be satisfactory.

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Perfumer's Shelf

Synthetic Clove Wax

According to a note in *The Perfumery and Essential Oil Record* (37:92, 1946), clove wax is a terpene ester, produced synthetically to imitate the fragrant wax found in flower petals and the foliage of tropical aromatic herbs. It is of a light brown color and has a pleasant aromatic odor. Its specific gravity usually varies between 0.80 and 0.90 and it melts at about 50°C. Clove wax is soluble in alcohol, ether and most organic solvents. It can be emulsified with water and fats and oils by the addition of small amounts of borax or potassium hydroxide. To prevent its bacterial or fungicidal decomposition when in emulsion a preservative is necessary; about 0.01 per cent of a mixture of the ethyl and propyl esters of para-aminohydroxybenzoic acid being suitable. This will also serve as an anti-oxidant.

Experiments have confirmed the suitability of clove wax for use in emollient creams, hormone creams and the like, where its odor serves as sufficient perfume and renders the addition of further oil unnecessary. An example of its use is given in the following formula for an anti-sunburn cream.

Clove wax	**9.00 Gm.**
White beeswax	**5.00 Gm.**
Phenylsalicylate	**0.10 Gm.**
Glycerine	**10.00 cc.**
Borax	**0.20 Gm.**
Preservative	**0.01 Gm.**
Water, to make	**100.00 Gm.**

This may be colored as required, or calamine may be added to give the cream body.

Essential Oils from Quebec Conifers

In a fifty-page report, J. Risi and M. Brule (Bull. No. 9, *Quebec Ministere terres and forets, Lab. produits forestiers*) present considerable information on the essential oils obtained from the twigs of some Quebec conifers. In their work, a laboratory-scale investigation was conducted on the production of essential oil by steam distillation of twigs of eastern white cedar (*Thuya occidentalis* L.), balsam fir (*Abies balsamea* L. Mill), white pine (*Pinus strobus* L.), black spruce (*Picea mariana* Mill), and eastern hemlock (*Tsuga canadensis* L.). Storage of the twigs for a few weeks before distillation does not appreciably affect the yield of oil, provided the twigs are kept under such conditions that they remain green. Chopped twigs give a higher yield of oil than whole twigs. Steam distillation at atmospheric pressure gave as good yields of oil as distillation with steam under 5 to 26 pounds pressure. Compact charging of the still gives better yields than light charging, presumably due to absence of "channelling" by the steam and consequent better contact with the charge. Twig from isolated trees give a higher oil yield than from trees growing in dense stands. Young trees generally give a higher yield than older trees. Yields vary with the season: maximum yields are obtained from January to April, the period preceding the high cambial activity in the spring. There is also a period of secondary maximum yields, lasting from September to November. Yields are smallest during the summer months, from May to August. Figures covering the average, maximum and minimum ranges of the chemical and physical properties of the oils are listed for such characteristics as: per cent. of yield, index of refraction, specific rotation, acid number, saponification number, specific gravity, boiling range, and solubility in 90 per cent alcohol. The yields that may be expected on a commercial scale are: cedar 0.6 to 1.0%, balsam 1.0 to 1.4%, pine 0.6 to 1.0%, spruce 0.5 to 0.7%, hemlock 0.4 to 0.6%. A description and discussion is given of suitable equipment for a small rural oil-distilling industry, its operation, and cost of installation and operation.

Wallflower Perfumes

In his discussion of wallflower perfumes, F. V. Wells (*Soap, Perfumery & Cosmetics* 19:217, 1946) notes that wallflower absolute has been obtained from the flowers, but artificial ottos are conventionally based on aubepine, linalol, rose alcohols, eugenols and ionones. Wallflower perfume is not at all easy to imitate successfully, the true soft and velvety character being difficult to achieve. Some extremely good ready-prepared compounds are normally available.

A wallflower perfume base, according to Wells, may be prepared along the following lines: Isoeugenol (up to 20 per cent), rhodinol and/or geraniol (up to 25 per cent), linalol (from 5 to 40 per cent), ionone alpha (up to 10 per cent), anisic aldehyde and of methyl hydratropic aldehyde) and a floral base, preferably ylang-ylang (up to about 5 per cent).

Other useful basic materials are: methyl eugenol, eugenol, benzyl and anisic alcohols, phenylethyl alcohol and methyl p-cresol (traces only).

In considering odor modifiers, it is suggested that, to round off the carnation note, the following may be considered in addition to ylang: oils of carrot seed and basil; geranyl and cinnamyl acetates. Further smoothness and floral character may be obtained with cinnamic alcohol, terpeneless petitgrain oil, methyl anthranilate, heliotropin, hydroxycitronellal; benzyl and rhodinyl acetates, and santalyl acetate. A velvety nuance may be imparted by the addition of a little patchouli oil. Araucaria and guaiac wood oils are also interesting in this respect. More pronounced florales should be used with considerable discretion, e.g. tuberose, cassie, broom and boronia absolutes.

A trace of indole is frequently useful. Other possible modifiers include nerol, dimethyl octanol, amyl cinnamic aldehyde, benzyl cinnamate and dimethyl benzyl carbinyl acetate. A verdant background may be imparted with amyl salicylate and a little phenylacetaldehyde.

Fixatives include benzyl isoeugenol, acaciol, amyl salicylate, musk ambrette, coumarin and ethyl vanillin, benzoin, styrax, tolu and Peru balsams.

In further comments, Wells observes that the related odor of night-scented stock may be simulated with a base of isoeugenol, methyl anisate, amyl salicylate, phenylethyl alcohol, anisic alcohol, ylang-ylang oil, amyl cinnamic aldehyde, hydroxycitronellal, ionones and bergamot oil, together with a little clove and patchouli oils and a trace of phenylacetaldehyde dimethylacetal.

Flavor Slide Rule

A clever gadget which serves as a flavor selector and cost calculator has been made available by Fritzsche Brothers, Inc. Provided as an easy-to-work slide rule, it aids in determining simply the recommended uses of the various flavor groups listed, the recommended proportions of each and the flavor cost per batch based on current quotations. The slide rule may be obtained from Fritzsche Brothers, Inc., 76 Ninth Ave., New York 11, N. Y.

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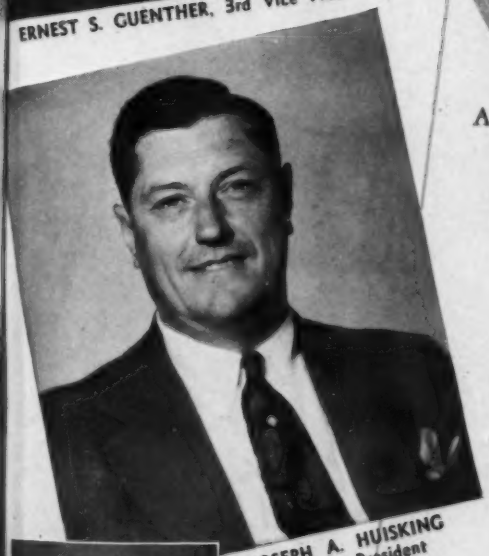

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Texas Cedar Oil Production

A note in the *Chemurgic Digest* for May 31, 1946 announces that a new cedar oil extracting plant has been opened near Junction, Texas. This now gives the state three such plants. A plant at New Braunfels and another at Bastrop have been in operation several years. The new plant, employing 25 to 30 people, will extract oil from mountain cedar for use in perfumes, leather dressings, furniture polish and similar products. The new plant will be operated by two chemical engineering graduates of Texas A & M College.

Hyacinth Perfumes

In another of his series of notes on flower perfumes, F. V. Wells (*Soap, Perfumery & Cosmetics* 19:377, 1946) presents concise data on hyacinth perfumes. The standard cultivated variety, *Hyacinthus orientalis*, and sub-species are grown in the Netherlands on a large scale. The expensive natural absolute, made available from this source, has been found to contain the following odorous constituents: benzyl and cinnamic alcohols, with the corresponding aldehydes and acetic esters; phenylethyl alcohol; ethyl and methyl benzoates; dimethyl hydroquinone; eugenol and methyl eugenol; and dimethyl anthranilate.

Wells observes that hyacinth flowers of different types and ages show very considerable variations of odor, some exhibiting an almost stupefying heaviness, while others show marked differences in rose, pollen, lily and jasmin shadings.

Of outstanding interest as bases of artificial hyacinth perfumes are the following aldehydes: phenylacetaldehyde; its methyl derivative, hydratropic aldehyde; and phenylpropyl (or hydrocinnamic) aldehyde. The first of these is the most widely used, in proportions of approximately 10-30 per cent. Hydratropic aldehyde, with its green and flowery pungency, may well replace phenylacetaldehyde either wholly or in part, but is best used with some restraint owning to its nasturtium-like pepperiness. Phenylpropyl aldehyde and alcohol are also valuable as a link with the other part of the nucleus, i.e., cinnamic alcohol, as in their case the green note is shaded with styrax. The corresponding acetals—phenylacetaldehyde and hydratropic dimethyl acetals, have similar hyacinth odors and enhanced stability, the latter truly suggesting the note of hyacinth bulbs. Cinnamic alcohol (10-30 per cent) has in itself a hyacinth character, coupled with a suave floweriness and excellent fixative properties. Bromstyrol has a crude, pungent, hyacinthine odor and is especially useful in toilet soap compounds, on account of its stability.

To complete the base, Wills refers back to the composition of the natural absolute. From 5-15 per cent of phenylethyl alcohol imparts the soft, honeyed rose odor of the flowers, and this note can be further emphasized with smaller amounts of phenylethyl phenylactate and/or salicylate. Benzyl acetate is frequently used in proportions of 5-10 per cent. Cinnamyl acetate, up to 5 per cent, blends remarkably well with the other constituents. Olfactory examination of the flowers usually reveals a distinctly lilied shading. For this reason hydroxycitronellal (2-10 per cent) and terpineol (up to 25 per cent) are useful as well as bois de rose oil, with its high linalol content, or linalol itself (up to 10 per cent).

In considering "florals," modifiers and the like, it is noted that genuine or artificial ylang-ylang oil is capable of imparting inimitable effects (5-10 per cent). A little hyacinth absolute is recommended for use in high-grade compositions. Other "florales" of interest are orangeflower, tuberose, rose, jasmin and violet leaf absolutes; also neroli, petitgrain and bergamot oils. Blending well in hyacinth perfumes are dimethyl benzyl carbinol (2-5 per cent) and its acetate. Heliotropin is often present (2-10 per cent). For the jasmin shading, a little benzyl propionate may be used with the acetate while an attractively honeyed jasmin note is given by amyl cinnamic alcohol. Methyl and dimethyl anthranilates are similarly useful for orangeflower shadings. Dimethyl hydroquinone helps to suggest the pollen-like note of the natural flowers.

Other blenders and modifiers include benzyl alcohol, benzaldehyde, phenylethyl acetate and isobutyrate, benzyl phenylacetate and proprionate, isoeugenol, cuminic aldehyde and the ionones. Special effects are obtained with styrolyl acetate (gardenia), phenylglycol acetate (jasmin/lily) and paracresyl acetate and phenylacetate (narcissus).

Vanillin and synthetic musks are sometimes employed. Most useful of all the fixatives are probably styrax, Tolu balsam and galbanum. Also suggested are labdanum, benzoin and civet.

Though fatty alcohols and aldehydes are possibly not present in the flowers themselves, an interesting finish can often be imparted by the restrained use of the series C_8 to C_{12}. For this purpose Wells expresses a personal liking for up to 1 per cent of decyl and lauryl alcohols, with not more than 0.2 per cent of lauryl aldehyde.

Concrete Essence from Viola Odorata Flowers

In a report recently made available through *Chemical Abstracts*, S. Sabetay and L. Traband (*Ann. Chim. Anal.* 23: 70, 1941) cite their previous work which showed that the concrete perfume from the Parma or Neapolitan violet, which is practically out of the market, contains about 21 per cent of eugenol. They felt that it would be interesting to know whether the perfume from the less expensive *Viola odorata*, which is widely used, also contained this constituent. Tests showed that it did not. Its concrete essence is obtained as a slightly greenish wax with the following characteristics:

Dropping point	**49-50°**
Acid number	**62.6**
Ester number	**53.7**

The perfume content, obtained by co-distillation under reduced pressure, is 4.4 per cent. The absolute essence from the flowers is obtained in a yield of 35 per cent, and has a greenish tint. It begins to solidify at 60 to 20° C. Its constants are:

Index of refraction	**1.491**
Acid number	**120**
Ester number	**45.1**

The fraction entrainable under reduced pressure by the Sabetay method is 8.33 per cent. The specific rotation, at 20°, is 1.464. The wax resulting from the preparation of the absolute essence has the following properties:

Dropping point	**55-56°**
Acid number	**21.6**
Ester number	**49**

The odor is easily distinguishable from that of Neapolitan violet.

Eugenol in Geranium Essence

In a report on the presence of eugenol in geranium essence, S. Sabetay and L. Trabaud (*Ann. Chim. Anal.* 27:191m 1945) state that small quantities of methoxyl have been found, in quantities ranging from 0.16 to 0.20 per cent, in seven samples. Eugenol was identified in the form of its benzoate in geranium essence from six widely distant localities.

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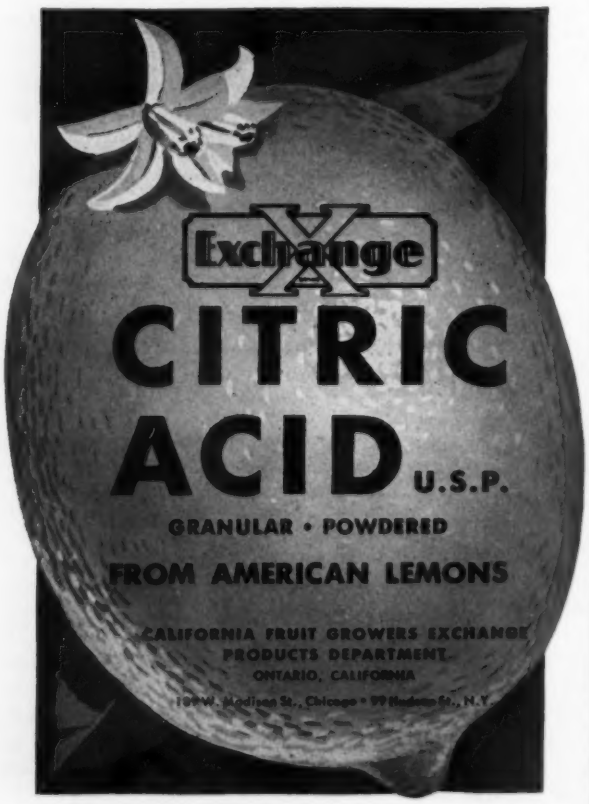

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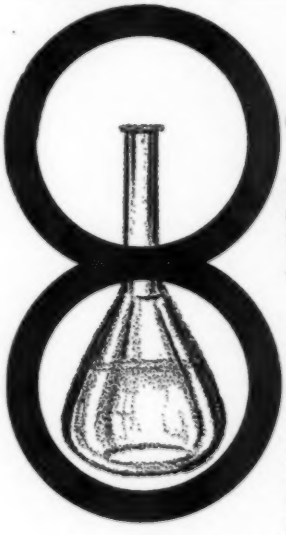

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High priced grain looms as the only available source of industrial alcohol when producers are permitted to resume production. Only a small quantity of Cuban molasses, the most economical raw material for production of industrial alcohol, will be available to American distillers this year.

Although the Treasury Department has signed a sugar contract in Cuba that will provide for the United States purchase of 115,000,000 gallons of molasses this year, industrial alcohol producers will have to look elsewhere for raw materials, it is understood.

The bulk of the available molasses will probably be distributed abroad by the International Emergency Food Council, successor agency to the Combined Food Board, it is reported. Much of it may go to England and European countries for feed, alcohol production and other uses.

The agreement to be signed in Cuba called for the United States purchase of 280,000,000 gallons of molasses at 13.6c per gallon and 40,000,000 gallons of alcohol at 65c a gallon before July 1, 1948.

Of the alcohol, 10,000,000 gallons will be purchased this year, 20,000,000 gallons in 1947 and 10,000,000 gallons in the first six months of 1948.

The agreement calls for the purchase of 115,000,000 gallons of molasses this year and 165,000,000 gallons in 1947. Included in the 115,000,000 gallons are 60,000,000 gallons previously arranged for on an interim basis pending conclusion of the negotiations.

Of the 60,000,000 gallons of molasses, 29,500,000 gallons were earmarked for United States consumption. More than 20,000,000 gallons have been delivered. The remaining 30,500,000 gallons were destined for consumption abroad.

Very little of the 55,000,000 gallons over and above the interim allocations can be expected to reach alcohol producers here, it is reported. There is no prospect that molasses will be made available for industrial ethyl alcohol production in August. Ethyl alcohol production from molasses was not permitted in July

JULY PRICE CHANGES

UP

Angostura bark 11c
Carnauba wax No. 1, 2c
Chamomile flowers Hung. 5c
Glycerin 3c
Lemon peel 5c
Menthol natural $1.65
Plantago seed 4c
Rhubarb root HD 25c
Senna Tinnevelly bold 1c
Silver nitrate 23c
Stearic acid 2½c
Tragacanth gum No. 1, 75c
No. 2, 40c

DOWN

Aconite root 5c
Bergamot oil 50c
Cantharides Chinese $1.75
Caraway oil 50c
Cascara sagrada 1c
Cedar leaf oil 5c
Ergot 5c
Gentian root 7c
Irish moss 6c
Lanolin 2c
Linalool 25c
Nutmeg oil 25c
Nux vomica ½c
Pimento berry oil 15c
Pine needle oil 35c
Saffron Valencia 50c
Sage oil Spanish 5c
Senega root 20c
Spruce oil 5c
Stramonium leaves 5c
Valerian root 2c

• Prices quoted in this section were current on the first of this month.

The Government's alcohol stockpile is now about 50,000,000 gallons. That amount, combined with synthetic alcohol production, is sufficient to satisfy requirements until the fall grain crop is available for raw materials, it is the contention of officials.

Withdrawals from the stockpile are about 9,000,000 to 10,000,000 gallons a month. By October the stockpile will have dwindled to 20,000,000 gallons. Below that point reserve stocks would be at an unsafe level, and the Government will have to make grain available for industrial alcohol production.

If grains are not held under price control and the Government does not provide grain at a reasonable price for industrial alcohol, prices may soar. Producers expect hectic times pricewise since competitive bidding for grain supplies by many consuming industries will tend to skyrocket the cost.

But since the capacity of synthetic alcohol plants is less than one-half the demand, substantial production will have to come from grain at almost any price until the flow of Cuban molasses is established on the basis of alcohol producers' requirements.

Quinine Prospects Good

Possibilities for the revival of quinine production in the Netherlands Indies were considered excellent, according to a report on conditions in Java and Sumatra. The report indicated that the industry has suffered less war damage than any other in the Indies. The stands of cinchona trees, from the bark of which quinine is derived, were said to have been kept in good condition during the Japanese occupation and installations for the manufacture of quinine actually were increased.

The reports indicated that a return to production at prewar capacity—the Indies produced about 95 per cent of the world supply—could be achieved as soon as general conditions had returned to normal.

Java's lone prewar quinine factory at Bandoeng, although in good condition, is not operating as yet owing to a labor

(*Continued on page 265*)

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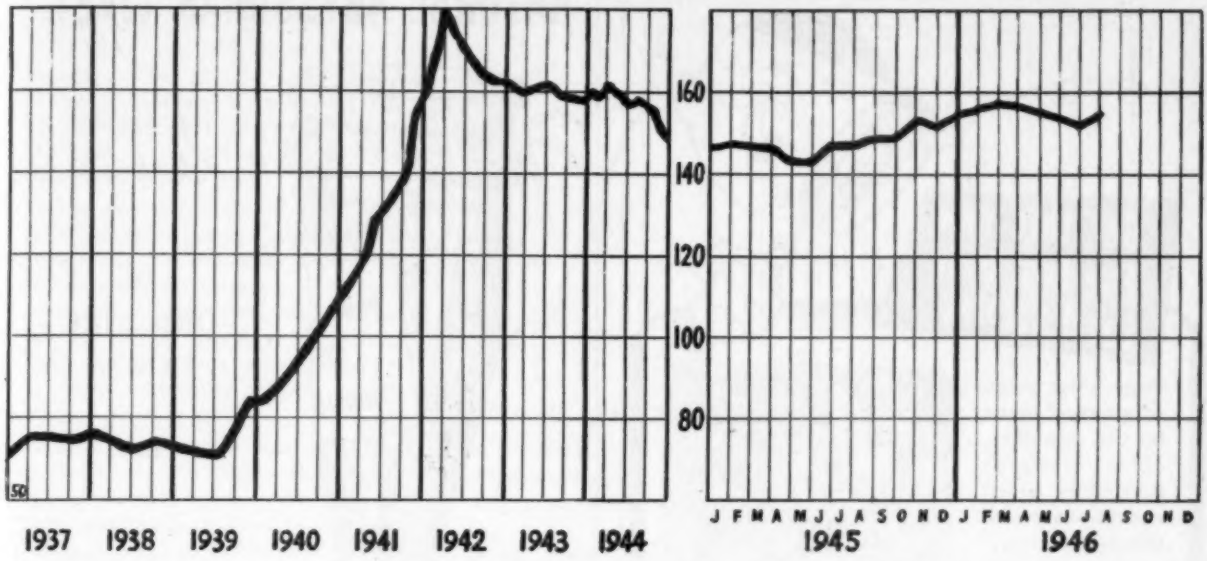
50 Raw Materials—Weighted Price Index. 1926=100.



The price index of fifty commodities for July advanced from 153.5 to 155.7.

Mint Oils Firm On Statistical Position. Essential Oils In General Show Strong Tone

Department of Agriculture estimates place the acreages of both peppermint and spearmint for oil at slightly less than that of 1945 but considerably above the 10 year (1935-44) averages.

A reduction of about 3 per cent in the peppermint acreage leaves 47,990 acres for harvest this year compared with 49,700 acres last year and an average of 35,880 acres. The reduction from last year results from smaller acreages in Indiana and Washington, which were not quite offset by an increase in Oregon. No change from 1945 is indicated for Michigan, Ohio and California.

Spearmint is expected to be harvested from an acreage one per cent less than in 1945 but 63 per cent above average—8,900 acres in 1946 compared with 9,000 last year, and an average of 5,450 acres. The 100 acre reduction occurred in Indiana, with Michigan showing no change.

In its July 8 report, the department said that, in general, the condition of the Indiana mint crop is good. Much of the area growing mint has received heavy rains during the past two weeks. On fields that have poor drainage, the mint growth has been retarded and wood growth is heavy. In well-drained muck fields mint has made excellent growth. Distilling will begin about July 15.

Preliminary acreage for 1946 with comparisons follows:

	Acres		
State	*10-year average 1935-44*	*1945*	*Preliminary 1946*
Mint (peppermint and spearmint)—			
Indiana	15,530	28,800	26,100
Michigan	20,090	17,200	17,200
Ohio	300	240	240
California	770	650	650
Oregon	2,970	7,500	8,400
Washington	1,660	4,400	4,300
Total 6 States	41,330	58,790	56,890
Peppermint—			
Indiana	12,140	22,000	19,400
Michigan	18,220	15,000	15,000
Ohio	300	240	240
California	580	650	650
Oregon	2,970	7,500	8,400
Washington	1,660	4,400	4,300
Total 6 States	35,880	49,790	47,990
Spearmint—			
Indiana	3,390	6,800	6,700
Michigan	1,870	2,200	2,200
California	*210	.....	.....
Total 3 States	5,450	9,000	8,900

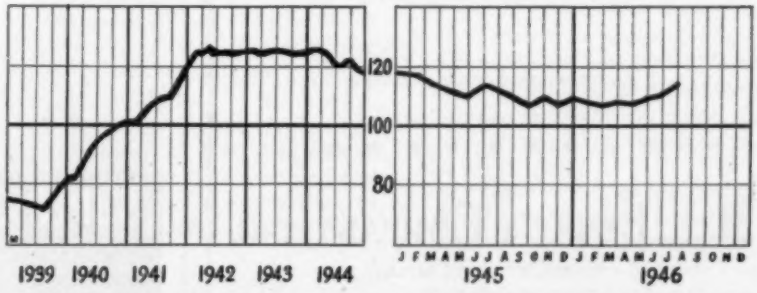
*Short-time acreage.

Mexican Lime Oil Exports Down

Mexico's exports of lime oil declined from 41.8 metric tons in 1944 to 39.7 tons in 1945, most of the oil being exported to the United States. The reduction is attributed to a decrease in the demand for lime oil in the United States because of smaller production of soft drinks and other products in which lime oil is used. Mexico's lime oil producers, nevertheless, are anticipating increased exports in the near future.

A group of growers near Valles, in the State of San Luis Potosi, is considering the establishment of a plant (with a daily capacity of between 25 and 30 liters) to produce oil of lime. Nearly all the lime oil produced in Mexico is distilled, and between 3½ and 4 kilograms are obtained from each ton of fresh limes. Approximately 90 per cent of Mexico's production is normally exported.

15 Medicinal Chemicals—Weighted Price Index. 1926=100.



The medicinal chemicals index advanced from 134.3 to 136 8. Menthol was sharply higher at $8.25.

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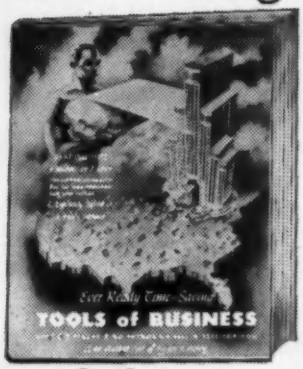

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Zanzibar Clove Crop Off

Zanzibar's 1945-46 clove crop of only 1,200 long tons was the smallest on record. The 1944-45 crop yielded 10,000 long tons and the 1943-44 crop 16,000 long tons. The previous record low was in 1938-39 when only 2,000 tons were picked.

The stockpile is also at a low ebb, being slightly in excess of 2,000 long tons. The distillery, which turned out between 500 and 600 pounds of clove oil daily during March 1946, was operating at only half its capacity, and stocks of buds and stems then on hand indicated a complete shut-down in May.

The principal reason for the small 1945-46 crop was the drought which prevailed throughout British East Africa during the past 3 years. Another reason was the prevalence of "sudden death," a disease which attacks the clove trees and causes the leaves to turn brown and fall off. Neither the cause nor the cure for this disease is known. It is reported that "sudden death" affects only the clove trees on Zanzibar and not those on Pemba, and that if it is not checked there will be no clove trees left on Zanzibar in about 12 years.

Essential Oil Exports From Haiti

The output of essential oils in Haiti was negligible until 1941-42. Exports during the past 3 years, all to the United States, reached a high point in 1944-45, both as to quantity and value. The following table shows a break-down of these exports from 1942-43 through 1944-45:

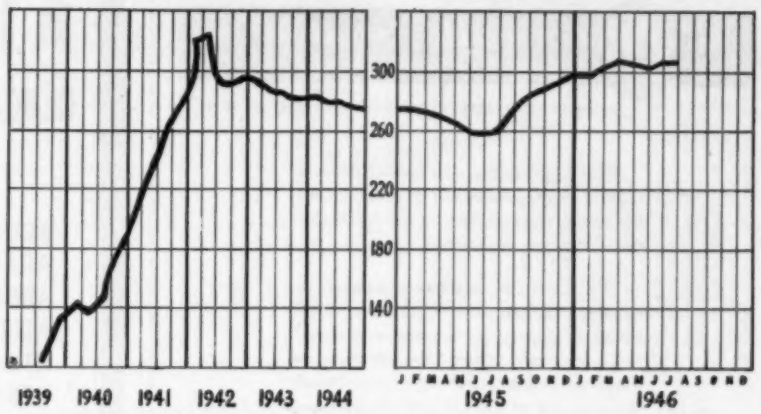
	1942-43		*1943-44*	
Items	*Kilograms*	*Gourdes*	*Kilograms*	*Gourdes*
Lemongrass	6,303	53,359	2,968	25,000
Lime	4,168	216,122	5,704	305,218
Neroli	6	11,000	149	146,213
Petitgrain	4,572	62,942	1,394	24,500
Sweet basil	82	21,500	241	45,815
Amyris	.....	.....	2,112	52,000
Citronella	.....	.....	.....	.....
Vetiver	.....	.....	1,229	295,745
Other	.....	20	.....	.....
Total	15,131	364,943	13,797	894,491

	1944-45	
Item	*Kilograms*	*Gourdes*
Lemongrass	4,743	38,528
Lime	10,078	536,441
Neroli	540	412,100
Petitgrain	3,082	58,020
Sweet basil	94	25,590
Amyris	10,216	284,336
Citronella	186	10,225
Vetiver	3,518	465,693
Other	.....	9
Total	32,457	1,830,939

Miscellaneous

Lemongrass oil is up. It is understood that some lots have changed hands among dealers at $3.75 per pound and it is quite likely the market will go to $4. As a result citral is likewise higher with major suppliers asking $7.25 to $7.50 per pound. More Bulgarian rose oil is being offered here, via Russia. Additional lots of bergamot and lemon arrived from Italy. Spice oils are tight since removal of price controls. Both Anise and cassia are considerably under the levels in force earlier in the year. Lemon and orange oils continue in an exceedingly firm position. Oil caraway continues competitive.

15 Botanicals—Weighted Price Index. 1926=100.



The botanicals index advanced from 299.2 to 299.9. Cascara was higher at 44 cents; rhubarb rose to $1.25; senna was up to 20 cents. Ergot was lower at $1.60; gentian dropped to 29 cents; nux vomica was off to 9½ cents.

Quinine Prospects Good

(*Continued from page 261*)

shortage. It has on hand about 700 metric tons of quinine, about one-third of the normal world consumption before the war.

However, two other quinine factories, which the Japanese built in September and October, 1943, by stripping machinery from tea and sugar factories in Java, are operating. One of these is at Soekaboemi 50 miles west of Bandoeng, and the other at Garoet, 30 miles southeast of Bandoeng.

The Soekaboemi plant has a rated capacity of 115 tons per month and the Garoet plant 100 tons. Last July, the last month of full production before the Japanese capitulation, they were producing 90 per cent of capacity, the report said.

At the present time, the Soekaboemi plant has on hand about two tons of cinchona bark and 161 tons of processed quinine while the Garoet plant has 10 tons of bark and 181 tons of quinine.

Silver Up

Both houses of Congress passed legislation authorizing the Treasury Department to sell silver for manufacturing purposes at 90.5c per fine troy ounce.

The new legislation provides that all silver mined after July 1, 1946 and turned over to the Treasury for monetary conversion must be sold within one year from the month in which the ore was mined.

A leader of the silver bloc declared the new price of silver represents a "floor" and he predicted that if the OPA is not revived, "the price will go much higher," probably to $1.29 per ounce. If price controls are again applied to silver, the 90.5c figure would probably become the ceiling price for industrial transactions.

The extent to which new mine production will be stimulated by the 90.5c price has not been estimated but it is reported that it will make possible an expansion of operations and explorations.

Glycerin Up

In keeping with the rising costs of tallow and greases, leading producers of glycerin have increased prices 3c per pound establishing the tank car quotation for chemically pure material at 21c per pound. Shortly after the ending of OPA business for saponification was noted at 41c and soap lye at 37½c per pound. It would be virtually impossible for refiners of glycerin to continue to pay such high prices for crude material, it was pointed out.

Glycerin goes into the manufacture of a long list of articles and buying for the account of the protective coatings industry is continuing at a high rate. Total demands are running ahead of production but there appears to be a somewhat brighter outlook regarding supply. The

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Government had intended to allocate 25,000,000 pounds of coconut oil for the soap kettle in July but this amount has been doubled for the current month, and it is indicated that even greater quantities of oil will be available for soap manufacture in the months ahead. About 3,000,000 pounds more glycerin can be had out of 50,000,000 pounds of coconut oil than from ordinary tallow and greases.

Cod liver oil production

Landings from the Lofoten fishery in Norwegian waters are the largest in many years and, inasmuch as the fat content of the liver is high, production of cod liver oil is good, reports the foreign press. During the 1946 season, 82,963 hectoliters of cod liver oil were produced in Norway, compared with 32,712 hectoliters in 1945 and 30,043 hectoliters in 1944. (These data cover the season ended March each year.)

The Canadian cod liver oil industry, developed as a wartime necessity, has become an established asset not only for supplying the domestic market but also devastated Europe. During 1945, Canada produced 538,574 gallons of cod liver oil, 232,574 gallons of which were of high grade medicinal quality, the remainder being suitable for animal and poultry feeding and industrial uses. In 1942, about 400,000 gallons of cod liver oil were produced.

Exports of cod liver oil from Canada totaled 223,763 gallons in 1945, compared with about 205,000 gallons in 1943.

Canadian fishermen are planning to increase their production of cod liver oil in 1946.

Stearates Up

Leading producers of stearates have advanced prices 3½c per pound and now quote as follows: calcium stearate technical 50 lb. lots 30½c per lb.; calcium stearate purified 50 lb. lots 48½c per lb.; calcium stearate impalpably powdered 50 lb. lots 32c per lb.; magnesium stearate purified impalpably powder 50 lb. lots 35½c per lb.; sodium stearate technical 175 lb. barrel 31½c per lb.; zinc stearate USP XII 50 lb. lot 34½c per lb.

Menthol Strong

Several sharp spot price advances in menthol featured the market for this item during the current trading period. The price range at this writing is from $8.25 to $8.50. The strength in this material can best be judged when a comparison is made with the price range of from $6.60 to $6.75 which prevailed here only four weeks ago.

Normally large consumers place orders at about this time for delivery in the Fall, with the result that activity in the spot market has taken considerable quantities of goods out of stock. Steadily rising prices in Brazil are also noted where a syndicate is reported to have recently been formed by two or three major operators. It is predicted in some quarters that the spot market will go to $9 per pound in the next few weeks.

Gum Tragacanth Up

Considerable activity is reported in gum tragacanth. Spot prices for number one gum advanced to from $5 to $5.25 per pound, with number two gum going up to from $3.65 to $3.90 per pound. Because of a recent flood in the port area few, if any, shipments are coming out of Iran. Gum that normally comes by rail from the interior is being shipped by sailboat and, according to reports, it will take another sixty days before conditions in the primary center become normal.

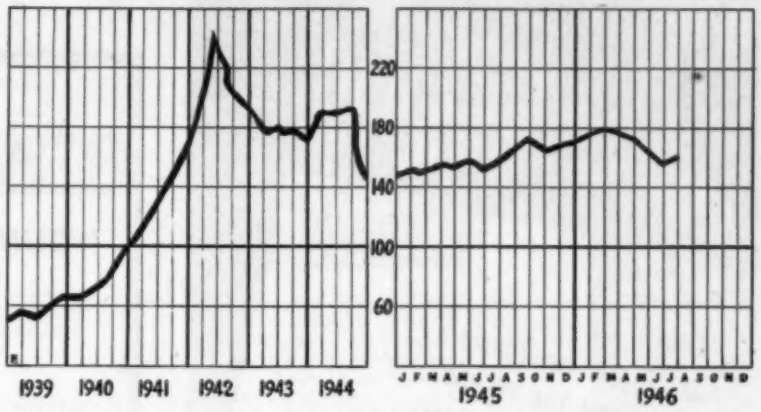
Ipecac Production

Costa Rica's exports of ipecac totaled 6,486 kilograms in 1945, with a declared value of $29,830 (United States currency), compared with 6,822 kilograms in 1944. The record volume in recent years was reached in 1941 when 43,147 kilograms were exported.

Prices were notably higher in 1945. On the basis of declared exports, one kilogram of ipecac brought $4.60 on the average in 1945, in contrast to $1.10 in 1939.

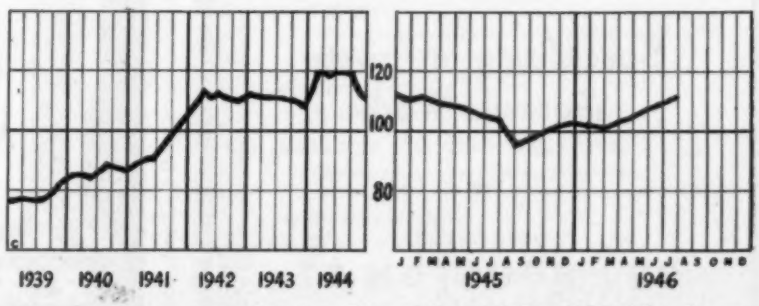
Sporadic attempts have been made to cultivate ipecac root, but roving gatherers help themselves as they are accustomed to do with the wild product. Partly for this reason, some cultivation has been abandoned. Ipecac is found chiefly in the San Juan River Valley, and is exported from Limon.

15 Essential Oils—Weighted Price Index. 1926=100.



The essential oils index advanced from 142.8 to 147.5. There were changes in anise, bergamot, and peppermint.

25 Cosmetic Raw Materials—Unweighted Price Index. 1926=100.



The cosmetic raw materials index advanced from 109.5 to 112.7. Glycerin was higher at 21 cents; menthol jumped to $8.25; stearic acid rose to 22¼ cents; gum tragacanth rose to $5.

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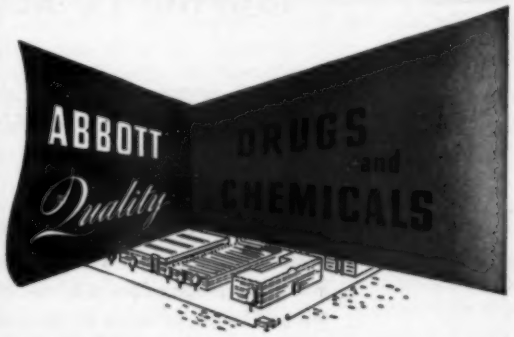

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BODY RUBS: Isopropyl Alcohol evaporates slowly, thereby prolonging the cooling effect when used in body rubs. Isopropyl Alcohol has no denaturants.

FACE AND HAND LOTIONS: Isopropyl Alcohol evaporates slowly, has little tendency to dry the skin, and aids in keeping the skin soft.

AFTER SHAVE LOTION: Isopropyl Alcohol is excellent for this product because it aids the after-cooling and skin-freshening qualities of the lotion.

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READERS' QUESTIONS

HAND LOTION: We are having some formula trouble with our hand lotion. The water settles on the bottom and the oil comes to the top. We are asking if you will be kind enough to give us a formula that is non-separating. Pittsburgh.

I think the trouble with your formula for making a hand lotion is due to the lack of a proper emulisifier, hence the separation of the water and oil phases. As has been pointed out on previous occasions, considerable skill and care is required in making hand lotion and they should all be tested before being marketed. By way of experiment I would suggest that you try the following formula as given by Chilson:

Stearic acid	**3.15**
Glycerine	**6.00**
Potassium hydroxide	**0.15**
Water	**79.30**
Alcohol	**8.50**
Perfume	**0.50**
Quince seed	**2.25**
Preservative	**0.15**

Dissolve the potassium hydroxide in one-third of the water and add the glycerine. Bring the rest of the water to a temperature of 80°C.; add the quince seed and soak for six hours and strain through muslin. Melt the stearic acid, dissolve the perfume in the alcohol, add to the hot potassium hydroxide solution, the melted stearic acid and boil for a minute. Allow the temperature to drop to about 70°C. and then stir it into the quince seed mucilage. Stir occasionally until cool, then slowly add the alcohol, preservative and perfume. Note: a clearer mucilage is obtained if it is made cold by soaking the seeds or the gum, as the case may be, over night. In this case the perservative should be dissolved in the water first.

INSECT REPELLENT: In this section of the country we are just about driven wild by black flies, "punkies" etc. and every fisherman or camper faces the threat of being eaten alive by these devils. In the army we used a dimethyl phthalate mixture which seemed to be quite efficient as a repellent. We understand that formulae for this type of preparation are under U. S. Patent control. We are very much interested in experimenting with an efficient insect repellent and would like to know if we could purchase the ingredients (dimethyl phthalate type) or the finished product in bulk, and bottle it under our own name. Brookfield.

Preparations containing dimethyl phthalate have been widely used as insect repellents. The patent to which you probably refer has been assigned to the United States Department of Agriculture, and I believe that you can readily obtain a license under this patent to manufacture an insect repellent. The patent itself is as follows: Bernard V. Travis and Howard A. Jones, United States Patent #2,356,801, issued August 29, 1944. I would suggest that you get a copy by sending 10 cents with your request for the patent to the United States Commissioner of Patents, Washington, D. C.

Although this patent has been abstracted in our publication, I should mention that it is based on the use of a mixture of dimethyl phthalate, 2-ethyl-1, 3-hexanediol and n-butyl mesityl oxide oxalate, in various ratios, such as 60-20-20, 80-10-10, and 33⅓—33⅓—33⅓. These can be used as such or diluted with other materials.

HAIR STRAIGHTENER: I should be extremely grateful if you would furnish me with information, formulae and processes for straightening negroid hair, and whitening negroid skins. As far as the first question is concerned I presume hair waving fluids could be used, but probably there is more to it than this. Rondebosch, Africa.

With regard to your first inquiry, gum preparations which resemble hair waving fluids somewhat could be used, but of course there are any number of modifications and variations which can be employed. Quite a number are based on the use of combinations of petrolatum and waxes. The following is an illustrative example:

Yellow patrolatum	**6 parts**
Yellow beeswax	**1 "**
Peanut oil (Refined)	**2 "**
Perfume oil	**sufficient**

Melt the petrolatum in double boiler and add the other ingredients. The perfume should not be added until the mixture begins to solidify around the edges. This is an amber product. If a water white product is desired use white petrolatum and white beeswax and substitute equal parts of deodorized castor oil and mineral oil for the peanut oil.

As to the whitening of negroid skins, I am sorry that I cannot give you very much information. Any drug or substance which would have such an effect would probably also be harmful to the skin.

INSTRUMENT STERILIZING SOLUTION: On page 155 of the current "Drug & Cosmetic Review" there is a description of an instrument sterilizing solution as developed by M. L. Tainter and associates. We should appreciate information as to formula, etc., of that solution. Your new "Review" is the most comprehensive volume covering the drug and cosmetic industry that I ever had the pleasure to use. Milwaukee.

This solution was described in detail by M. L. Tainter and his associates in the *Journal of the American Dental Association*: 31:479, 1944 and was abstracted in *Drug & Cosmetic Industry*, May 1944, page 584. Since you do not appear to have this issue, I am repeating the formula as given originally:

Isopropyl alcohol	**1,000 cc.**
Oil of rose geranium	**2 cc.**
Oil of cinnamon (or cassia)	**4 cc.**
Distilled water	**780 cc.**
Sodium nitrite	**4 Gm.**
Monoethanolamine or triethanolamine	**60 cc.**
Solution of formaldehyde U.S.P.	**160 cc.**

The ingredients are mixed in the order given to avoid overheating. The solution can be colored if desired. The mixture should not be diluted when used and care should be employed in handling it because frequent contact may cause dermatitis.

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Lipstick Formulation

(*Continued from page 187*)

stantially, it imparts great rigidity, and, properly used, gives a stick with high luster. But, excessive proportions lead to extreme hardness, and must be avoided. Ozokerite, except for its mineral character which promotes incompatibility (immiscibility), makes the stick harder in the sense of being more resistant to crushing and breakage during use; large amounts tend to make the stick crumble on the lips. Paraffin, also immiscible with other components when it is present in large proportion, is useful in imparting luster and some slip to the finished stick; higher melting varieties should be used to keep the mixture hard. The newer amorphous waxes, both high and low melting types, offer promise for use in lipsticks.

Castor oil is properly the basis for lipstick formulation because of a combination of valuable properties. A properly selected grade is odorless and tasteless and will remain so in the stick; it is unusually stable to oxidation and thus is slow to become rancid; it is a better solvent for bromo acid than is usually admitted; it is both viscous and tacky. Since it is compatible with beeswax to the extent of being moldable to a stick of fine appearance, the combination of the two makes a good basis upon which the desired lipstick may be formulated. Where less drag is desired, another, non-tacky, vegetable oil may replace part of the castor oil. This oil, which can be selected almost at random from the list of oils customarily used in cosmetic preparations, will require a greater degree of preservation than castor oil, but will tend to make application easier and also helps as a coupling agent to keep otherwise immiscible components together. Various esters, more or less similar chemically to natural vegetable oils and fats are frequently utilized in lipstick formulation. The reason ordinarily given for their inclusion is to increase solution of bromo acid and thus improve staining power; this may well be so, but any important proportion of these materials will also modify the general properties of the lipstick and this factor must be considered. Only those esters should be included in the formulation that have medium or high viscosity (to reduce the tendency to "sweat") and are very low in volatility. The evaporation of an oily material may leave a porous stick that has lost much of its mechanical strength and also lead to deposition of oil within the case. A minimal quantity of high viscosity mineral oil is frequently desirable since it acts as a lubricant to facilitate application and imparts a degree of luster to the deposit on the lips.

A group of intermediate substances—greases—are indispensable in modern lipsticks. Cocoa butter, for instance, gives a velvety feeling to the lips during and after application, and cetyl alcohol behaves similarly. A small amount of petrolatum confers greasiness, where that quality is lacking and is desired. Lanolin has a many-sided usefulness in lipsticks: it is an emollient, it is tacky and improves adhesion, it is a solvent for bromo acid, above all it is a coupling agent which improves the

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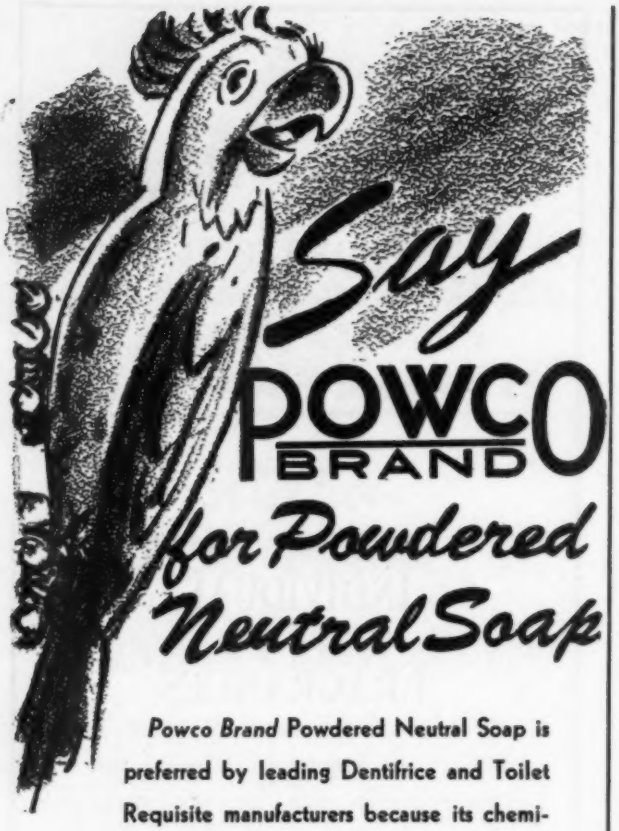

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homogeneity of the lipstick base.

From the above groups of components selection can be made to lead to almost any desired set of lipstick properties, once it has been determined just what is wanted. Lipstick formulations, however, as all other cosmetic combinations, are not good merely because they are complex; the best formulas are invariably simple ones. Combinations of ingredients with similar properties are not necessarily better than individual ingredients alone; there should always be a specific reason for the inclusion of every component.

Preservatives and antioxidants must not be added to the lipstick as a slightly bothersome afterthought, since they are vitally important to shelf-life. Even where drastic bacterial action and rancidity do not occur, incipient effects may lead to sourness as well as change in application properties. Preservatives and antioxidants are not the same products, as is sometimes thought. Although both properties are sometimes present in the same compound, one activity is usually predominant. To prevent bacterial attack, the preservative is required; to retard oxidation, a compound must be added to lengthen the inductive period as much as possible. Unfortunately, many active antiseptic and bacteriostatic agents used in pharmaceutical practice cannot be utilized on the lips because of their irritant properties. Antioxidants of high efficiency used in rubber and gasoline are for the most part both irritating and toxic.

Concerning the problem of perfume in the lipstick, a wholly satisfactory job is yet to be done. The perfume, aside from its all-important odor, must be non-irritating. To this can be added equally important requirements of low volatility and inoffensive taste. Lipstick cases make little pretension to being air-tight and volatile components, especially perfume, will in time vanish. This in spite of the probable fixing, enfleurage, action of the lipstick base. More important is the known, but sometimes disregarded fact that the temperature for molding lipsticks is in the neighborhood of 100°C. and the mass must be kept at this temperature for a more or less extended period of time. With a poorly formulated oil, even if some of the odor is left after this treatment, it may well be different in character from that of the original mixture due to differential evaporation of the components of the complex mixture. It might be well to check a perfume oil before use by determining the loss of weight it undergoes when submitted to molding temperatures for a time. Furthermore, perfume oils for the most part have a vile taste, as can be attested by any chemist who has made a mistake whoile pipetting one. It is not easily possible to select only essential oils and aromatic chemicals without taste for use in lipstick perfumes, but surely the judicious use of saccharin, dulcin, vanillin and its derivatives, and other flavoring materials, could go far in making the mixture inoffensive if not actually attractive.

Important as the lipstick base is in determining quality, the lipstick is primarily a device for coloring the

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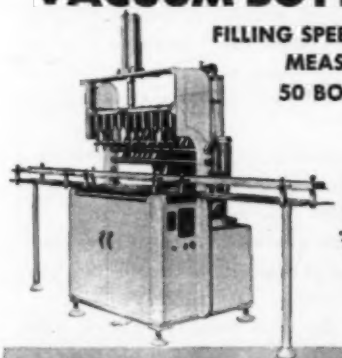

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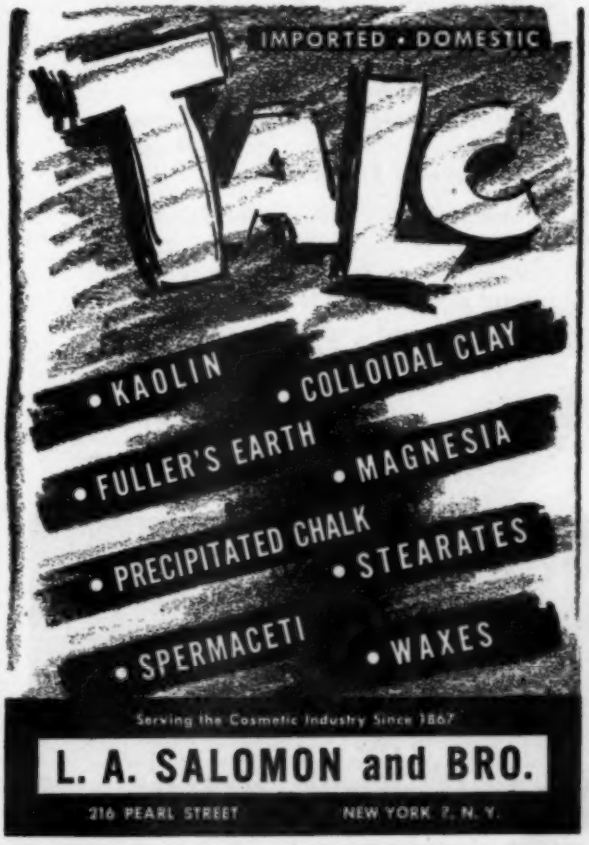

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lips and the question of color in lipsticks is of paramount importance. Do not forget that the following discussion always presupposes the use of only permissible, certified colors. These may be divided into two categories, soluble colors and insoluble pigments, the former including various types of bromo acids.

In considering soluble colors, we refer to those that are more or less soluble in the base; water-soluble coloring materials are not ordinarily soluble in waxes and oils and need not be considered for inclusion in lipsticks. The so-called bromo acids, brominated fluoresceins, are the most important of the soluble dyes used in lipsticks. Most commonly used is D&C Red No. 21, tetrabromofluorescein, giving a bluish red stain, with some use—occasionally being made of D&C Orange No. 5, dibromofluorescein, for its more yellowish note. These might well repay investigation for shade variation and different solubility characteristics.

Bromo acids, when incorporated in the proper type of base, leave a more or less indelible stain on the lips and thus serve to provide lasting color after the lipstick mass itself has been dissipated. In a wholly mineral wax and oil mixture, however, they are ineffective. Castor oil dissolves up to about 2 per cent. of the dye, and the solution quickly leaves a pink stain on the skin which can only be removed by vigorous scrubbing with strong soap and water. This solubility effect has led to the search for solvents better than castor oil, but suitable solvents, when found, must be considered in relation to their effect upon the lipstick as a whole. Water-soluble materials, and especially those that are water-dispersible, may make the mass as a whole less permanent, and thus defeat their purpose; some are too volatile or too fluid. In this search, moreover, the investigator may lose sight of the fact that components of the lipstick other than castor oil, especially the greases and waxes, may have sufficient solvent power alone or in mixture to bring about considerable increase in stain. Finally, even undissolved bromo acid in a lipstick containing some dye solvent will have active staining power.

Other soluble dyes used may be dismissed with a brief note. These are oil-soluble certified colors used primarily to change the top-note of the stick (the "black" lipstick of some years ago); they have some influence on the shade as it appears on the lips but have virtually no staining power.

Insoluble pigments, the true basis of lipstick color, may be the pure insoluble color, an insoluble salt, or a lake color in which the soluble dye is precipitated upon an insoluble base. Iron oxide pigments are useful in attaining certain effects, their pro-oxidant effect being subject to over-emphasis. A most important pigment is titanium dioxide, to provide both coverage and shade modification. Zinc oxide is less useful because of the likelihood of reaction with any free fatty acid that may be present in the base.

Since slight variations in processing lead to distinct shade changes in a dyestuff of presumably constant analysis, the same product from different manufacturers

will not give the same tone, so that brands may not be used interchangeably. Even from the same producer, relatively slight changes may be expected from batch to batch and these may sometimes have a cumulative effect requiring formula revision.

In any event, enough colors are available, either in original form or as mixes made by the manufacturer to make possible an extremely wide range of lipstick tones. These can be various depths of pure red, with variations to either the yellow or the blue side. The use of titanium dioxide is a special matter; this white pigment does not merely make the mixture lighter in shade but almost invariably adds a blue note. It is generally best in developing a shade to utilize a single pigment that reasonably well approximates the desired shade and then make additions that will lead to the required effect. Certain pigments, notably those of dark hue will greatly modify the top tone of the stick without exerting a visible influence upon the shade produced on the lips. Incidentally, the Munsell color charts should be of great value, especially to stylists, in determining the exact shade of lipstick to fit in with a forthcoming color promotion.

Only intimate dispersion of colors will give full development of the shade. This is especially true where titanium dioxide is included in the color mix, where poor dispersions result in a streaked appearance. Supplementing very intimate grinding, the use of the correct dispersing agent can be very useful in preventing streaks. Two points must be watched in this connection, however: most dispersing agents have some emulsifying action and tend to make the lipstick somewhat soluble in water; dispersing agents greatly reduce the viscosity of a base and pigment mixture and may exert an untoward effect upon the general properties of the completed lipstick.

Multiplicity of pigments in a lipstick formula is the trade-mark of the tyro or the careless laboratory man. Any shade can be made by adding one color after another to the first mixture; rematching the shade for production batches then becomes a back-breaking job. After the proper shade has been attained by any means it is worth the relatively small amount of effort involved to rematch the stick on the basis of two or three pigments in definite proportions. As regards color matching itself, for either control or development purposes, photoelectric or other devices are most impressive in appearance, and give numerical data that can be kept for record purposes; for the most part, however, they are less useful than a skilled eye.

Ordinarily, discussions of lipstick formulation stop at this point with the implication that the amount and type of pigment used is of minor importance. Nothing could be further from the truth, since pigment content has a vital effect upon lipstick qualities. Just consider, for example, the difference in consistency between unpigmented petrolatum and petrolatum which has been ground with twenty per cent of zinc oxide. The latter is a stiff, white paste differing in melting point, hardness, spreading ability, tackiness, etc. from the original.

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The same phenomenon takes place when pigment is ground into the lipstick base. A base that is far too soft by itself will give a lipstick with fine application properties when ten per cent of pigment is included; fifteen per cent of pigment may well give a product that is too hard and dry. Obviously, then, only a finished lipstick of proper shade should be submitted for application testing and other shades in the same line must contain the same proportion of pigment. This is admittedly only part of the story: different pigments have widely different rheological properties and adjustments must accordingly be made. A lipstick containing a large proportion of dense titanium dioxide will differ very considerably in consistency from one containing substantial amounts of a bulky rhodamine lake. Consequently, for identical lipstick consistencies, one shade containing ten per cent of pigment will be matched by another containing twelve per cent of dense pigments or still another with only eight per cent of bulky pigments. These factors may be still further altered if dispersing agents are included in the mixture.

In short, formulation of lipsticks is very far from a simple matter, involving as it does the balancing of scientific, empirical and subjective data; manufacturing details are no less complicated and must be reserved for a future discussion.

Folic Acid

(*Continued from page 190*)

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The Present Status of Vitamins

(*Continued from page 185*)

siderable increase over 1944. The druggists were asked to give their total volume of vitamin business including all vitamin preparations except plain cod liver oil. Based on the results of the questionnaire, the Canadian vitamin business for 1945 was $11,251,235 as against $8,941,126 for 1944. Calculating the average as for 3,720 drug stores in Canada the amount worked out to $3,024 per store.

In the past there has been a great deal of guessing about the volume of vitamin business done by Canadian drug stores during the past few years. The more optimistic have gone out on a limb by conjecturing that as much as 25% of the drug stores' business came from the

vitamin department. Surveys by the Canadian Pharmaceutical Association, however, reveal this not to be the case. For example, in 1944 vitamins accounted for 5.3 % of the total volume. It is interesting, however, that there has been a steady growth in Canadian vitamin business from the year 1940. At that time, the volume of vitamin business was estimated to be $2,552,550. It is clearly evident that the Canadian vitamin business has come a long way over the past 5 years.

Conclusion

It should be obvious to even the untrained observer that vitamins still mean dollars. While the rate of increase is levelling off, there is still no doubt that vitamin sales are of first-rate importance to the drug industry. A survey of the medical literature leads one to believe that therapeutic vitamins are the products of the near future. While there will probably always be a need for supplementation formulas the signposts point toward therapeutic vitamins as the class to keep an eye on.

Arthur L. Fletcher

(*Continued from page 191*)

position. Many Pierce customers have written letters of gratitude describing the store's famous service. Said one happy Pierce shopper:

"S. S. Pierce is a part of Boston. I first went there, hand in hand with my grandfather, in quest of adventure. Grandfather's gardener had quite a reputation for the vegetables and fruits he produced . . . and during the season, my grandmother's dinner parties were famous for the asparagus course. Grandfather always claimed that the only fruits and vegetables that could compare with his own were S. S. Pierce's canned goods, and a special brand of these was the only one he ever allowed to be served at his table."

In 1887 S. S. Pierce put in a perfumery department. This wide-awake New England concern recognized at even that early date the beginning of a trend toward greater use of perfumes and cosmetics. It was only a short time before the department was outgrowing its abbreviated quarters. Sam Pierce became known as the leading toilet goods house in New England—a description which it jealously guards even today.

Since 1920, S. S. Pierce's drug and perfumery department has grown by leaps and bounds. With six retail stores and a very well-stocked wholesale department, Pierce drug and cosmetic sales have progressed handsomely under the capable management of Mr. Fletcher and his very competent assistants. In addition to acting as New England distributors for several cosmetic lines S. S. Pierce also has its own line, which they call Parfum Lionceau. Pierce's own cosmetics were made, bottled and packaged in France. They sold at prices ranging from $1.00 to $50.00. During the war the factory making the Pierce line was taken over by the Germans. The resourceful Mr. Fletcher, however, replaced the French made line with U. S. manufactured and packaged products. They call the American-made

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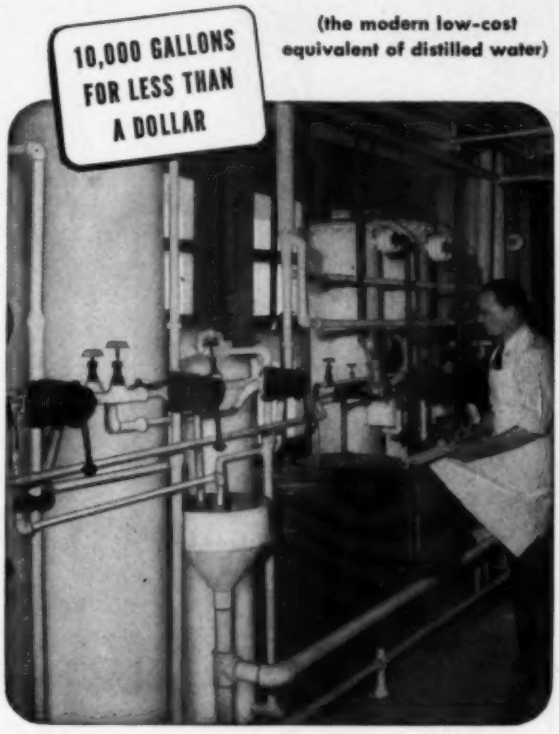

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Editor's Note: Sorrowly, we announce that Mr. Fletcher, the subject of this article passed away July 15. However, we are publishing the article as approved by Mr. Fletcher as a tribute to the memory of an outstanding figure in cosmetic marketing.

Space Cosmetics

(*Continued from page 193*)

metic industry might very well find it a highly paying venture to turn some of its accomplished chemists loose on the study of the prospects of using cosmetics for space cooling, combining comfort with the bracing atmosphere of the outdoors at low cost. Certainly mechanical refrigeration of rooms can not have exhausted all the possibilities of room cooling and air conditioning and a large market is waiting for any enterprising manufacturer, or a whole industry, with the know how, either by the use of chemicals exclusively or in combination with a cheap mechanical distributor.

Researchers also believe that the sale of room disinfectants could be extended substantially, to the benefit of the health of the nation, by the manufacture of disinfectants that are germ-repellent as well as pleasingly odorant and avoid the hospital smells that are today the principal reason of their still only limited demand for home use; entirely out of proportion of their necessity.

Wide open for study are also the numerous possibilities of employing cosmetic preparations as insect repellents for outdoor use (not applied to the person) by way of scents pleasing to the human nose but displeasing to the olfactory nerves of the insect world. Millions of small-town porch sitters and the families of gentlemen farmers, nothing to say of an unnumbered army of vacationists supply a ready market.

Having become alive to the needs of scenting cupboards and closets to remove factory smells from their clothing war workers have turned to perfumes and other preparations during the last years. They have laid thereby, together with the growing demand for moth protectives, the foundation for a new branch of the cosmetic industry which, while still in its infancy, carries with it the seeds for considerable growth before long.

Closet cosmetics in the form of danglers, sachets and similar articles have sufficiently familiarized the consumer with the thought that any enclosed space wherein clothing is kept deserves as much cosmetic attention as the body.

However, while the use of fragrant herbs, flowers and other odorizing materials to scent rooms, cupboards, closets was in universal use in late colonial days and the early republic, it has lost much of its former popularity since then.

A revival of the practice should not offer unusual difficulties. It can be made very profitable for the cosmetic industry, if it helps at the same time in recaptur-

ing part of the large business that it has lost by default to the moth proofing industry; by the introduction of products that scent as well as protect the contents of the closet.

While cosmetic chemists will not have much difficulty in dealing with the technical problems of their task of carrying the cosmetic industry into these new markets they can not afford, though, to rely entirely upon their present methods.

Too much attention has been paid to hiding obnoxious smells, not enough is yet known of the processes of deodorization.

To be 100 per cent satisfactory and fully acceptable to the womens' market home deodorants must be deodorizers in the real sense of the word. They must deodorize, remove the odors of the kitchen, tobacco smoke, etc. from hangings, furniture coverings and the room atmosphere. This to be followed by a process of scenting that will give reasonable protection against the early reabsorbtion of the complained of smells, if such a result is at all obtainable.

In other words, the development of new uses for cosmetics must be preceded by a thorough study of cosmetic ways and means. No lasting successes for the cosmetic industry can result unless its venturing into new places is based upon sound chemical practice.

Equally important is an early start in laying the foundations for the commercial exploitation of whatever it will be that chemists will contribute to the future growth of the cosmetic business.

If space-cosmetics, in their many forms, should supply the answer for the approaching growth problems of the cosmetic markets the consumer must be accustomed, well ahead of their appearance in larger numbers, to the idea that a cosmetic should not be thought of as an article for personal use exclusively but that cosmetics make a probably even more important contribution to comfortable, healthful living.

Admittedly the term "space-cosmetics," how graphically ever it may present its meaning to the cosmetic chemist, will not recommend itself favorably to the advertising experts who, after all, will have to perform the spade work for these new preparations, once after the chemists have finished with their work.

However, the 140,000,000 individual customers that constitute the present market of the cosmetic industry live banded together in 35 millions of households. Making these households customers of the cosmetic industry in addition to the individuals that find shelter within their four walls, is worth the extra efforts that it will cost in thinking and hard cash to put space-cosmetics upon the American toilet goods counters, instead of letting them languish in the low priced markets into which they, most certainly, will sink if nothing is done on their behalf.

Finding a more suitable and better descriptive name for them can very well be left for the future as this new line of cosmetics establishes itself in the thinking of the American consumer.

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Influenza

(Continued from page 195)

embryo allantoic fluid, that has been most widely investigated and used.

The need for a satisfactory influenza vaccine became imperative with the advent of war, when the mixing of populations, with its attendant stresses and strains, made an epidemic a dreaded possibility. Although some preliminary work had been done, it became necessary to make large-scale tests to determine the efficacy of the vaccine available at that time. The first of these tests was made in the winter of 1942-43 under the auspices of the Commission on Influenza, Army Epidemiological Board; 8,000 people being included in a vaccinated study which employed inactivated virus A and B concentrated from allantoic fluid. Comparisons of the antibody titers before and after vaccination revealed that over 90 per cent showed a sharp increase in two weeks. Other tests, made over a longer period of time, indicated that a slight decline in antibody titer had occurred after four months. Nonetheless at the end of one year the antibody values remained well above those before vaccination.

Because no recognizable epidemic occurred during the winter following vaccination, it was decided to make special tests to determine what benefits had been obtained from the vaccinations. For this purpose two groups were tested for resistance to infection by intranasal inhalation with type A and type B viruses, respectively. The results indicated that vaccination two to four weeks before infection had a pronounced beneficial effect. The influence of vaccination against influenza B appeared to persist during a four months' interval, but this was less evident against influenza A.[23]

With this data at hand, it was decided to make a somewhat larger series of tests during the influenza epidemic of the winter of 1943-44. For this purpose about 12,500 men in nine groups of Army Specialized Training Program units in different parts of the country were selected to test the efficacy of the vaccine against the natural disease. Half the men were given the vaccine, while the other half, injected with isotonic solution of sodium chloride, served as the controls.

The summarized findings showed that the incidence of clinical influenza in the vaccinated group was 2.2 per cent and in the control group the incidence was 7.1 per cent. In almost all localities the trend was the same. From the combined results in all units, it appeared that vaccination was effective in reducing influenza incidence to about one-fourth.[23, 26, 27, 28] On the whole, the results showed that there was a reduction of about 75 per cent in the occurrence of influenza among the vaccinated men as compared with the controls, and that loss of manpower hours was reduced because the illness in vaccinated persons was milder and shorter.[29]

The epidemic of 1943-44 was essentially one of influenza A. The winter of 1945 afforded an opportunity to check the efficacy of the combined A and B vaccine against influenza B. During an epidemic of

influenza B in November and December of 1945 at the University of Michigan it was possible to compare the incidence of the disease in an Army unit of 600 men which had been vaccinated against influenza and another service unit of 1,100 men which had not. Only seven, or 1.15 per cent of the 600 men were admitted to the hospital for respiratory infection during the epidemic period. In contrast 109, or 9.91 per cent of the unvaccinated unit living and observed under similar conditions required hospitalization.

"The evidence clearly indicates," concluded the investigators,[30] "That subcutaneous vaccination with inactivated influenza virus types A and B exerted a striking protective effect against epidemic influenza B."

From these data, it is evident that, when properly used, influenza vaccine affords about 75 per cent protection against influenza A and an even higher ratio of protection against influenza B. Even in those in whom infection does occur, vaccination appears to reduce the severity and length of the illness.

The vaccine is best given at least a week or ten days before a person is exposed to influenza in order to allow time for immunity to the disease to be built up in the body. The Commission on Influenza[26] found that the prophylactic effects of influenza vaccines are greatest during the second week following injection, at which time it reduces the average attack rate of influenza by about 85 per cent. The postvaccination immunity decreases in efficiency after the second week, affording only about 40 per cent protection by the end of six weeks.

Studies on the duration of immunization to influenza have an important bearing on this point. Thus, Hirst, Pickard and Friedewald[31] found that even after one year the great majority of vaccinated persons had antibody levels considerably higher than their prevaccination values. An investigation on the occurrence of epidemic influenza one year after vaccination showed that the attack rate among vaccinated persons was consistently lower than that of individuals not so treated. Despite the fact that the average reduction in the attack rate was about 35 per cent, it was felt that this was "insignificant for practical purposes." These workers believe that there would be much greater economy in the administration of vaccines if they were given in the fall of an outbreak, after its identification, rather than if the vaccines were administered in advance of each epidemic season, since it is difficult to predict the exact time of onset.

Another, more recent report[32] strongly suggests that vaccination as long as a year old may prevent or at least limit outbreaks of influenza which might otherwise be severe. However, these findings were obtained following the use of a preparation containing larger quantities of virus than those usually employed. It is evident therefore that only time and careful study can tell how long the acquired immunity will persist in a normal individual. It is also obvious that influenza vaccines will not be used for general immunization, as is small pox vaccine. At the present stage of development it

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will be employed widely only when an influenza epidemic threatens.

Although the vaccines provide a really potent weapon to curb influenza, there is still much to be learned about them. As remarked by Francis:[33] "There is still need for the evaluation of the most effective strains to be employed so as to give the widest range of immunity; there is the question of the optimal of virus which can be used; beyond a certain point the possibility of toxic reactions enters; how long does the immunity last and can it be bolstered by multiple rather than single doses; what methods of production of materials or even of immunization are to be the most practicable?"

Because safety has been established and prophylactic value demonstrated, influenza vaccines are now available for general use by physicians.[33] Although a number of vaccines have been developed, it is very likely that only two types will find general distribution. These are the so-called eluate type and the centrifuge type.

Only the eluate type of vaccine was used in the studies sponsored by the Commission on Influenza. The preparation of this type of vaccine, made according to a process developed by Francis and Salk,[34] is based on the observation that chick red blood cells added to suspensions of influenza virus adsorb both the A and B types of virus and that such adsorbed virus can be quantitatively eluted. In practice, the process is essentially as follows: Diluted influenza virus is inoculated by puncture into the embryonic fluid of ten-day-incubated fertile hen eggs. The eggs are then incubated for two days, after which the shells are cut around the air sac, the membrane broken, and the blood vessels ruptured. The embryonic fluid and blood are then aspirated, chilled to from 2° to 5°C. overnight, and centrifuged when cold. The supernatent fluid is removed by aspiration and discarded. The virus remains adsorbed on the red cells. Fifty cc. of physiological saline solution is added to each container and the entire contents of five bottles are transferred to one 250 cc. centrifuge bottle. These are incubated at 37°C. for two and one-half hours, to elute the virus, and centrifuged. The supernatent fluid is aspirated into five-liter bottles. Formaldehyde solution is added to inactivate any infectious capacity and a preservative, like phenyl mercuric nitrate, is also incorporated. The vaccine is then tested by inoculation of mice and eggs to show that no infectious ability remains. A hemagglutination test is also run.

Offering a number of advantages over other procedures, the centrifuge method for making influenza vaccines was accepted by the Army in April 1945 as an alternate for the elution method. Developed by Stanley,[3, 35] the centrifuge type of vaccine is prepared by concentrating the virus in chick allantoic fluid by means of high speed centrifuges and resuspending the sedimented virus in a smaller volume of buffer solution. The vaccine is inactivated with formaldehyde solution, preserved with phenyl mercuric nitrate, clarified and standardized with regard to nitrogen content. It is then

tested for sterility, inactivation of the virus, and immunizing potency. Aside from the facilitated method used in its manufacture, this type of vaccine also has the advantage of containing much less non-virus protein than other kinds of immunizing materials.

In discussing his method, Stanley made an important observation with regard to the possibility that a virus other than the A and B types might enter the influenza epidemic picture. He stated that should this occur, the new vaccine production methods are such that newly isolated strains could be incorporated in the vaccines within a few days after isolation.

Since the new vaccines do not offer complete protection, other preventive measures against the spread of influenza are being studied. Especially noteworthy are the various methods for sterilizing the air by means of vapors or aerosols, and by ultraviolet light radiattion.[11, 36, 37, 38] Offering considerable promise as preventive measures, these methods warrant more extensive consideration than can be given here.

Of course, common sense measures, like avoiding crowds, infected persons and contaminated materials, good dietary, rest and hygienic habits, and such, still play a major role in preventing the spread of the disease.

When influenza strikes, every person with the disease should be put to bed immediately. It has been the experience of doctors that those patients, who are put to bed early had fewer symptoms and complications.[39] People who try to keep on their feet and "stick it out" are the ones who contribute the greatest numbers to the death rolls. In their weakened condition secondary invading organisms gain a foothold and permit the development of more serious complications, like pneumonia.

Symptomatic treatment is given to relieve the patient. Up to the present time at least, rest, isolation, aids to respiratory comfort, and perhaps the judicious use of sedatives, have not been supplanted in the treatment of influenza.[5, 40] As is well known, the sulfa drugs and penicillin have no specific effect on influenza itself, but these agents are of tremendous value in combating bacterial complications and reducing mortality.

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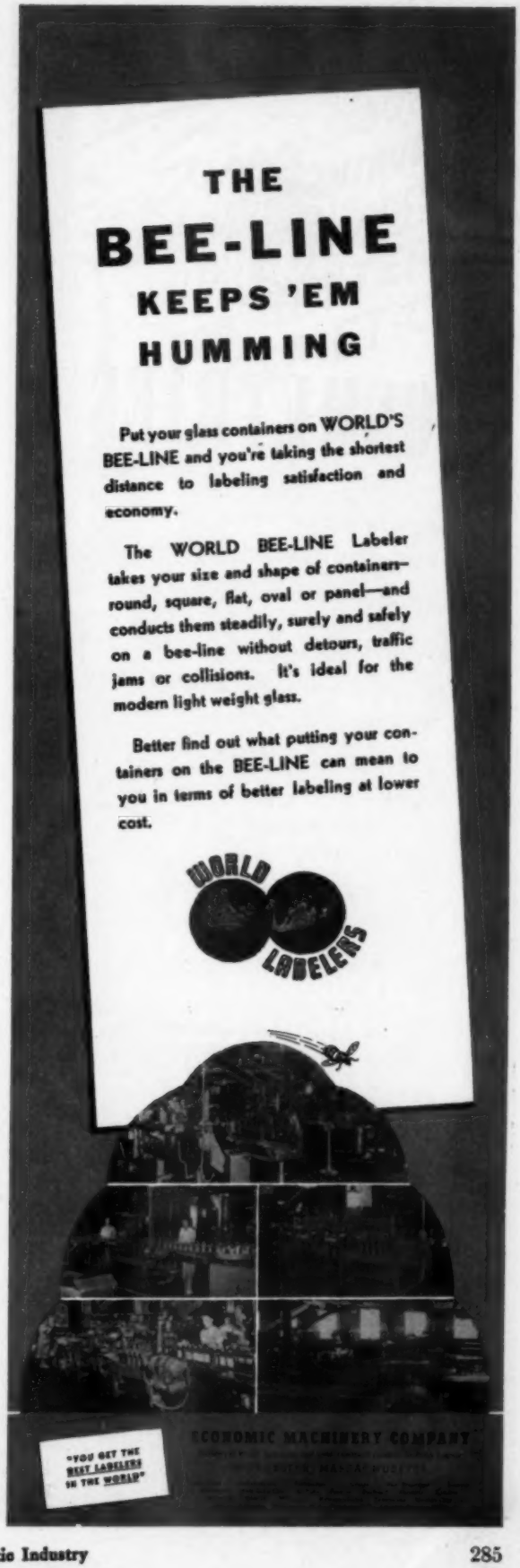
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The Doctor Examines His Mail

(*Continued from page 197*)

mailers that make up the 22.4 per cent group.

"Twenty-five per cent of all pharmaceutical mail received by physicians advertises an endocrine or a vitamin—broken down, 12.6 for the endocrines and 12.4 for the vitamins. In the hormone field, a large part of the effort is concentrated behind a fairly small group of products. There are many more vitamin products advertised. For multiplicity of products, the ointment group, representing only 7.2 per cent of the total mail, runs neck and neck with the endocrines.

"There were 625 individual products brought to the doctor's attention by mail during the twelve months period. These 625 products appeared 2,002 times (excluding house magazine and catalog advertising), or an average of 3 mailings per product.

"The most startling figure is that 223 products were advertised just *once*. A single attempt during a whole year to break into an established prescribing habit! It is true that many of the products in this group are marketed by small manufacturers, but a very large number belong to major companies. At the other extreme, the record number of mailings on one product was 38.

"The quality of direct mail to physicians is improving steadily despite paper shortages and various production difficulties. More color and better art work are being used. It is evident that the pharmaceutical field will maintain its past record of winning a substantial number of awards in the annual direct mail leaders' contest, sponsored by the Direct Mail Advertising Association."

A look at the tables will give the interested reader a closer picture of current medical direct mail and practices.

Fishbein and Cosmetics

(*Continued from page 183*)

alkaline salts were applied or introduced under divers conditions. Such work I have carried out in Chicago, New York, Ann Arbor, and Detroit. The totality of results suggests that:

"(a) There is no primary skin irritation from thioglycolic acid or alkaline derivatives at levels below 8 per cent.

"(b) I have not seen evidence of sensitization and allergic responses with properly prepared materials under any circumstances.

"(c) Hydrogen sulfide formation can be controlled through stabilization.

"(d) In my tests measurable systematic responses have not occurred in animals after parenteral introduction.

"Wholesale condemnation of all cold wave process is not, I believe, warranted."

In the same issue an editorial appears calling attention to the fact that Dr. McCord states that liver damage has not been definitely proven. The editorial straddles the issue of whether or not cold wave processes are harmful by stating "that there exist no definite standards as to what is safe or harmful, that experimentation before launching such products is for the most part inadequate and incomplete and that it is time for public recognition of the fact that as much careful evidence needs to be accumulated regarding the safety of substances placed on the surface of the body as those taken into its interior before these preparations are released for use to the general public."

Last month in Hygeia, the A. M. A. lay publication which Dr. Fishbein edits, there appeared an editorial on cosmetics and their dangers. To indicate just how vicious the Doctor is being in his attacks, we quote in part from this editorial:

"The introduction of many new chemical substances into the various preparations that are placed on the surface of the body to change if not to improve its appearance has brought to the attention of physicians many cases of sensitivity to such substances with reactions varying from eruptions and inflammations to cases of constitutional disturbances including anemia and damage to the liver and other organs.

"Most recent to attract public attention is a report by a New York physician of a number of cases of poisoning and sensitivity reactions among hair dressers and other women to using a process for creating a permanent wave known as the cold wave process. . . . The thioglycolic acid which is the chief material used to change the proteins of the hair has as a by-product hydrogen sulfide which is a toxic substance and one to which many people may be sensitive. Also the New York physician found that women who had previously used hydrogen sulfide as a depilatory were more likely to react severely when subjected to the cold wave process.

"The many reports that are appearing in medical

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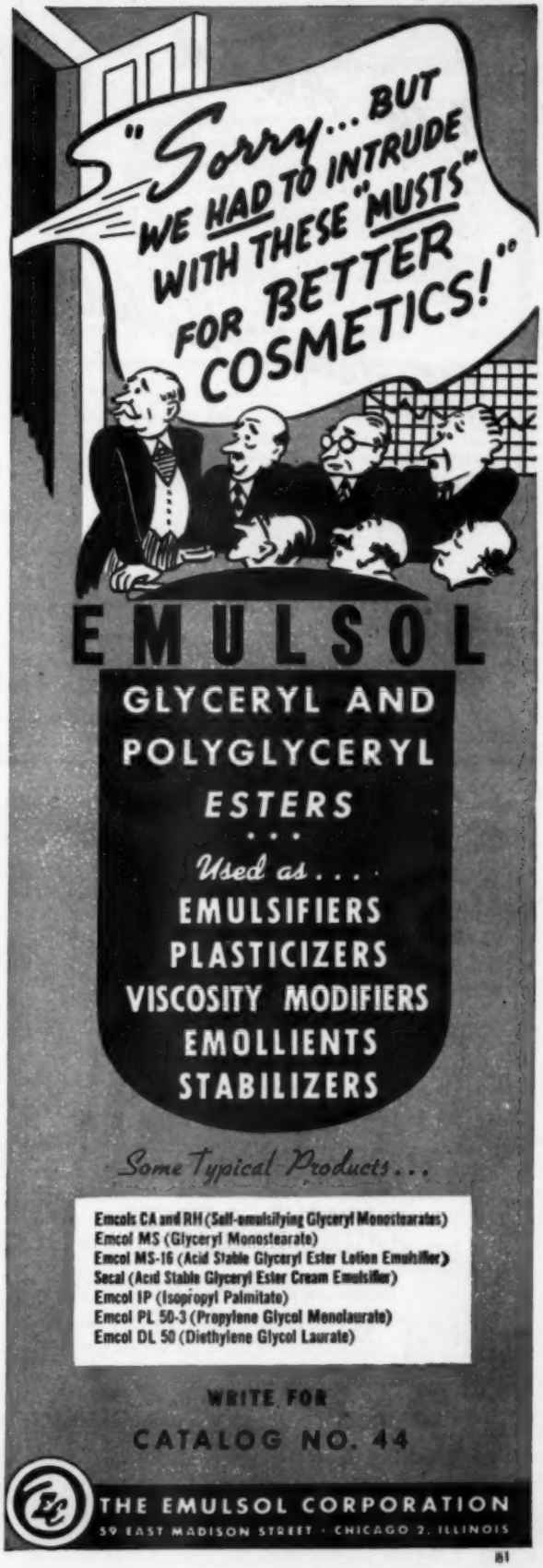
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writings about sensitivity to the ingredients of nail polishes, rouges, up sweep hairdo lacquers, varnishes, cold wave materials and similar substances indicate that manufacturers in these fields ought to do much more preliminary experimentation than they have been accustomed to doing in the past if the women who use these substances are to be guaranteed freedom from harm . . . It is time that there be public recognition of the fact that as much careful evidence needs to be accumulated regarding the safety of substances placed on the surface of the body as is required regarding substances taken into the interior of the human system."

Even though Dr. Fishbein rants and raves in many of his talks about women rubbing hormones on the skin and that this might well be a dangerous procedure, he has not been able to get the Food and Drug Administration to take any action against hormone creams. As the result of his first attack on these creams, which indicated that the preparations might cause cancer, and which was broadcast throughout the newspapers of the country, New York City banned the sale of these creams. However, after reviewing the evidence, this restriction against their sale in New York City was rescinded. The State of Virginia later banned the sale of these creams, also later to rescind this action. And finally, just last month the State of Louisiana rescinded a similar action against the sale of hormone creams. Likewise with the cold permanent wave, nail polishes, rouges, up-sweep hairdo lacquers, or other products. But this will not stop him from continuing his attacks anymore than if ever stopped Benarr MacFadden or a host of other pitchmen from attacking many harmless and beneficial drugs, so long as his subject has wide popular appeal. If Dr. Fishbein has a cause of merit, he should, in justice to the people whom he is trying to protect, take it up with the proper officials in Washington and with the officials of the cosmetic manufacturing industry, both of whom will be happy to lend their support to anything which will benefit the health and welfare of the users of cosmetics.

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